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THE EVOLUTION OF U.S. ARMY DOCTRINE:
FROM ACTIVE DEFENSE TO AIRLAND BATTLE AND BEYOND

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE

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This study explains the recent evolution of U.S. Army doctrine. During the last two decades, the Army revised its capstone manual -- FM 100-5, Operations -- three times: in 1976, 1982, and 1986. A fourth revision is underway in 1991. This thesis chronicles the change in doctrine by analyzing the differences between the four versions of FM 100-5. It then employs external factors and internal factors to explain the recent change in doctrine. The thesis concludes that in 1976 constraining external factors forced the Army to adopt a doctrine that was at odds with its internal needs. The early Reagan years, in contrast permitted a return to a doctrine that better served the Army's interests. Though environmental changes call that doctrine into question in the nineties, the Army resists significant changes to a doctrine that satisfies its internal needs. The U.S. Army's current doctrine addresses organizational preferences better than operational requirements.

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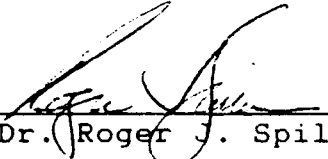

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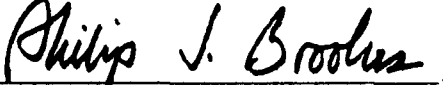
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ABSTRACT

THE EVOLUTION OF U.S. ARMY DOCTRINE: FROM ACTIVE DEFENSE TO
AIRLAND BATTLE AND BEYOND by MAJ Jeffrey W. Long, USA,
326 pages.

This study explains the recent evolution of U.S. Army
doctrine. During the last two decades, the Army revised its
capstone manual -- FM 100-5, Operations -- three times: in
1976, 1982, and 1986. A fourth revision is underway in
1991. This thesis chronicles the change in doctrine by
analyzing the differences between the four versions of FM
100-5. It then employs five external factors (the change in
technology, strategy, threat, domestic political context,
and resource base) and four internal factors (the Army's
organizational interests, the process of doctrine
development, the bureaucratic politics within the Army, and
the cognitive psychology of the Army's leaders) to explain
the recent change in doctrine.

The thesis concludes that in 1976 constraining external
factors forced the Army to adopt a doctrine that was at odds
with its internal needs. The early Reagan years, in
contrast, permitted a return to a doctrine that better
served the Army's interests. Though environmental changes
call that doctrine into question in the nineties, the Army
resists significant changes to a doctrine that satisfies its
internal needs. The U.S. Army's current doctrine addresses
organizational preferences better than operational
requirements.

iii

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

The past fifteen years have been an uncommon era of continuing doctrinal innovation for the United States Army. This thesis identifies the factors that best explain this doctrinal renaissance so that we may better assess and employ current doctrine, better predict the future course of doctrine, and perhaps better develop doctrine in the future.

An Uncommon Era of Doctrinal Innovation

The doctrinal innovation of the U.S. Army since the mid-seventies is unprecedented. First, the frequency of the doctrinal revisions and the magnitude of the consequences for the Army surpass those of any other period in the history of the U.S. Army. Second, the futurism that inspires the innovation is unique; rarely has a future concept figured so prominently in military doctrine. Finally, the recent spate of doctrinal innovation is remarkable because it is anomalous. Factors that traditionally explain innovation in military doctrines fail to explain the extraordinary innovation of the last two decades.

1

During the last twenty years, the Army revised its fundamental doctrinal manual, Field Manual 100-5, Operations, three times -- in 1976, 1982, and 1986. A fourth revision, in progress, is scheduled for publication this summer.

FM 100-5 is the cornerstone of U.S. Army doctrine. Even modest revisions to FM 100-5 propagate shock waves throughout the Army. Any change to FM 100-5 can provoke the revision of dozens of more specific, derivative field manuals. FM 100-5 describes how the Army intends to fight, which determines, in turn, the Army's organization and equipment. Changes to the concepts described in FM 100-5 can spark substantive change in the Army's organization and equipment.

While the 1986 revision might be considered modest, the revisions in 1976 and 1982 were significant. The 1976 edition focused on weapon systems and emphasized attrition warfare more than any previous American doctrine. It underlined the merits of an elastic defense that traded space for time. Though the manual was much broader in scope, soldiers labeled it "Active Defense." The Army equipped itself for the Active Defense. The new doctrine justified the M1 Abrams tank, the M2 and M3 Bradley fighting vehicles, the AH 64 Apache helicopter, and the Multiple Launch Rocket System (MLRS). The Army undertook a thorough

reevaluation of its organization that culminated in the Division 86 reorganization. The Active Defense doctrine prompted a new generation of equipment and a new organization, but the Army in the field never really accepted it.

The 1982 edition of FM 100-5 took a 180 degree turn. This revision emphasized maneuver rather than attrition rates. The integration of air and land combat was so prominent that its authors labeled it "AirLand Battle." AirLand Battle capitalized upon the new weapon systems that the Army had ordered for Active Defense and demanded more. Its emphasis on command and control and deep attack justified a new radio (Single-Channel Ground/Airborne Radio System or SINCGARS), Mobile Subscriber Equipment, the Maneuver Control System (MCS), the Army Tactical Missile System (ATACMS), and the Joint Surveillance and Target Attack Radar System (JSTARS). AirLand Battle shaped the final revisions of Division 86 and framed the Army of Excellence reorganization. Whereas Active Defense never enjoyed the support of the field, the greatest significance of AirLand Battle may be its widespread acceptance by the Army. Analysts credit AirLand Battle with restoring the Army's aggressive, warrior spirit.[1]

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[1] See for example C. Kenneth Allard, <u>Command, Control, and the Common Defense</u> (New Haven, CT: Yale University Press, 1990).

The 1991 edition, which will codify the results of a series of studies collectively known as AirLand Battle Future, promises to be significant as well. The new edition will project a need for an Army capable of nonlinear combat and require new equipment and a new organization.[2] To win on a nonlinear battlefield, the Army will need improved deployability, long range surveillance, ground force operational range, lethality, and endurance, command and control, and logistics. GEN John W. Foss, Commander of the Training and Doctrine Command (TRADOC) which writes doctrine, believes AirLand Battle Future will require a reorganization of the Army's division.[3] The shopping list of new equipment is shaping up: the Army Tactical Command and Control System, Unmanned Aerial Vehicles, Armored systems modernization, Light helicopter and Longbow radar, and the Armored gun system.[4] The 1991 edition of FM 100-5 may rival all previous editions in significance.

The frequency and scope of change in U.S. Army doctrine since the mid-seventies belies the stereotype of

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[2] For a concise description of the emerging doctrine see MG Stephen Silvasy, Jr., "AirLand Battle Future: The Tactical Battlefield," Military Review LXXI.2 (February 1991) and GEN John W. Foss, "AirLand Battle-Future," Army 41.2 (February 1991).

[3] Foss, 34-36.

[4] Eric C. Ludvigsen, "Future Combat Systems: A Status Report," Army 41.2 (February 1991): 38-44.

the military as the most hidebound bureaucracy. Innovation
in doctrine, particularly innovation that provokes such
significant change, is uncharacteristic of large
organizations, especially the military.

Large bureaucratic organizations are more apt to
resist change than to innovate. They are normally
conservative: they adhere to standard operating procedures,
stick to the tried and true, and when obliged to change,
change only incrementally.[5]

This is especially true for the military.[6] The
hierarchical organization, the discipline, the socialization
steeped in tradition, and the insular nature of the military
combine to impede innovation. The uniquely dire
consequences of failure at war further distinguish the
military from other bureaucracies. The military more than
any other organization has good reason to be risk averse and
to plan against the worst case.

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[5]For the theoretical development of these ideas see John
D. Steinbruner, The Cybernetic Theory of Decision: New
Dimensions of Political Analysis (Princeton: Princeton
University Press, 1974) and Peter F. Drucker, Innovation and
Entrepreneurship: Practice and Principles (New York: Harper
and Row, 1985), especially Chapter 14.

[6]For a colorful discussion of military conservatism in
this century, see John P. Campbell, "Marines, Aviators, and
the Battleship Mentality," RUSI 109 (February 1964): 45-50.

For these reasons, the military historically resists change.[7] Rather than preparing for future wars, the military tends to prepare to fight past wars. The U.S. Army's futurism since the mid-seventies contrasts starkly with the historical conservatism of most armies.

A careful analysis of the Napoleonic era convinced the senior leaders of the French Army that the offense was the superior form of war. German barbed wire and machine gun fire, however, proved the obsolescence of the French offensive doctrine in World War I. Seared by the experience of the Great War, the French Army concluded that the defense was the superior form of war. The French built a defensive doctrine and the Maginot Line. Unfortunately, the Germans developed the Blitzkrieg.

This French example reveals "the central paradox" that normally haunts the doctrine of armies:

> namely, that in few spheres of human activity are change and progress so constant and the need for accommodation and adjustment so unremitting as in the military; yet in few spheres, seemingly, are the ruling minds so rigidly resistant to change.[8]

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[7]Edward L. Katzenbach provides one of the most widely read examples in an essay that explains the persistence of the horse cavalry despite technological advances that rendered it obsolete. Edward L. Katzenbach, Jr., "The Horse Cavalry in the Twentieth Century," in Robert J. Art and Kenneth N. Waltz, eds., The Use of Force: International Politics and Foreign Policy, 2nd ed. (Lanham, MD: University Press of America, 1983), 203-222.

[8]Campbell, 49-50.

Armies are organizationally predisposed to resist change, yet obliged to keep pace with the dynamic environment. The doctrinal innovation of the last two decades seems to indicate the U.S. Army has escaped this paradox.

A number of factors provoked change in military doctrine in the past. Technological revolution that produced a marked increase in the mobility or lethality of systems, a change in the threat's capabilities, organization, or doctrine, demonstrated failure in war, and changes in the national strategy have all triggered significant shifts in doctrine in the past.

These traditional causes of doctrinal change, however, fail to provide a compelling explanation for the U.S. Army's doctrinal reversal in the early 1980s and accentuation in 1991. Though technology, threat, and strategy remained fundamentally constant, Active Defense was replaced in 1982 by a distinctly offensive AirLand Battle doctrine.[9] The methodically studied firepower/attrition doctrine was abandoned though it had never been tested by combat. A doctrine affirming the decisiveness of maneuver replaced it.

A nation's strategy delineates and prioritizes the missions and capabilities of its armed forces. As a result,

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[9] This contention, presented without support here, will be developed at length in Chapter 3.

7

doctrine adapts to changes in strategy. The rising status
of the offensive in our doctrine since 1982 does correlate
with the globalization of our national strategy and an
increased emphasis on contingency operations. However,
since the Berlin Wall fell and the Soviets began withdrawing
from Eastern Europe, the U.S. strategy in Europe has aimed
at increasing stability through arms control, primarily by
constraining the offensive capability of the antagonists.
The on-going doctrinal revision, though largely provoked by
the changing European environment, is curiously out of step
with the current American strategy. Rather than promoting
defensive alternatives, the 1991 edition of FM 100-5 will
accentuate the offensive disposition and capabilities of our
forces. The U.S. Army doctrine is apparently immune to the
most recent turns in our strategy.

Traditional triggers to change in doctrine
(revolution in technology, change in the threat,
demonstrated failure in war, and adaptation to a reformed
national strategy) do not account for the curious and
extraordinary doctrinal innovation of the U.S. Army since
the mid-seventies. Rather, organizational preferences, not
environmental obligations, sparked the innovation.

A final element distinguishes this recent spate of
doctrinal innovation: the doctrinal twists and turns caused,
and were caused by, a remarkably vibrant and unmilitary

debate. Active Defense sparked, and AirLand Battle fueled, an often heated dispute, recorded mostly in the pages of Military Review.[10] Captains argued unabashedly with generals on the printed page. The unparalleled interest in doctrine and the tolerance for an open debate largely account for what was truly a doctrinal renaissance.

Research Question

What best explains the evolution of U.S. Army doctrine from Active Defense, through AirLand Battle, to AirLand Battle-Future? What lessons can be drawn that might inform the development and employment of U.S. Army doctrine in the future?

This thesis will argue that the recent wave of doctrinal innovation does not reflect a newfound ability to keep up with objective change in the environment. Rather, internal machinations explain recent change in doctrine. Current doctrine reflects the biases of the decision-makers, the organizations, and the decision-making process.

Armed with that insight, those who design doctrine can strive to reduce the bias and more nearly approach the optimum. Those who use doctrine, to fight or to teach others how to fight, will find reason to think critically

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[10]Dr. Roger J. Spiller, Command and General Staff College, is preparing an anthology of articles that chronicles this debate.

9

about each situation rather than accept "doctrinal solutions."

The case study will explore a number of dialectics that inspire recent, current, and emergent doctrine: the rivalry between firepower and maneuver, the dispute between systems analyst and historian, the competition between the offense and the defense. While the thesis will be unable to resolve these long-standing disputes, it may be able to explain the pendulum-like swing between the poles of the dispute that results from personal and institutional bias.

By demystifying doctrine, the thesis may help to restore the primacy of strategy. If doctrine is scientific truth, it must delimit strategy. If it is but the preference of soldiers and services, then it can be readily subordinated to a strategy. An increasing number of strategists believe we can escape the security dilemma and achieve stability at lower cost by relying on defensive doctrines. In opposition, the authors of doctrine, particularly in the U.S., seem most confident of offensive solutions. Knowing the proper relationship between strategy and doctrine will be essential to seizing opportunities while avoiding hazards in the international tumult of the nineties.

Literature Review

Extant literature on doctrinal change can be classified as either descriptive history or theoretical analysis. This thesis is unique in the span of time covered and the breadth of factors considered.

Descriptive Histories

The evolution of U.S. Army doctrine and the process of doctrinal revision since the early seventies is well documented. In a _Leavenworth Paper_, MAJ Robert Doughty[11] reviews the evolution of U.S. Army doctrine from World War II through the adoption of Active Defense. MAJ Paul Herbert in another _Leavenworth Paper_[12] takes a much closer look at the adoption of the Active Defense. Both advance plausible explanations for the change in doctrine; neither employs a deliberate methodology that would allow him to derive general conclusions about the forces that shape doctrine. An accurate history of the 1982 revision has been compiled by John L. Romjue, TRADOC historian.[13] His monograph is

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[11] Robert A. Doughty, "The Evolution of U.S. Army Tactical Doctrine, 1946-1976," _Leavenworth Papers_ 1 (Fort Leavenworth, KS: Combat Studies Institute, August 1979).

[12] MAJ Paul H. Herbert, "Deciding What Has to Be Done: General William E. DePuy and the 1976 Edition of FM 100-5, _Operations_," _Leavenworth Papers_ 16 (Fort Leavenworth, KS: Combat Studies Institute, 1988).

[13] John L. Romjue, "From Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1982," _TRADOC Historical Monograph Series_ (Fort Monroe, VA: United States Army Training and Doctrine Command, June 1984).

descriptive and deliberately avoids critical analysis.
Aaron Blumenfeld's thesis entitled "AirLand Battle Doctrine:
Evolution or Revolution?"[14] is a useful complement to this
official history. Finally, Daniel J. Hughes, the U.S. Army
Combined Arms Center Historian, has compiled a descriptive
history of the AirLand Battle Future studies.[15]

This thesis will extend the work done by Doughty,
Herbert, Romjue, and Hughes to incorporate the most recent
developments in doctrine. By spanning four revisions in a
single work, this thesis will be able to compare and
contrast the revisions and more accurately assess the
content and significance of each revision.

More importantly, by including all four turn points
in a single study, this thesis will be able to evaluate the
relative weight of factors used to explain doctrinal change
across multiple events. While the preceding studies have
taken a historical approach, aimed at explaining a
particular event, this thesis will be deliberately
analytical, aimed at explaining doctrinal change in general.

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[14]Aaron Blumenfeld, "AirLand Battle Doctrine: Evolution
or Revolution? A Look Inside the U.S. Army" (B.A.
dissertation, Princeton University, 1989).

[15]Daniel J. Hughes, U.S. Army Combined Arms Center
Annual Historical Review, 1989 (Fort Leavenworth, KS: CAC
History Office, U.S. Army Combined Arms Center, 1990).

Theoretical Analyses

Several authors have tried to explain deductively the evolution of doctrine. All have chosen an empirical test spanning a different period and/or nation than this thesis. None has tried to explain the evolution of U.S. Army doctrine across the last two decades. None has considered as comprehensive a list of variables.

Robert Jervis and George Quester were among the first to develop theories about why nations choose different military doctrines.[16] These original theories argued that doctrinal choices were determined by technology. While technology plays an important role, no single variable can adequately explain the multifarious change in U.S. Army doctrine after 1976.

Barry Posen, in The Sources of Military Doctrine,[17] most closely approximates the method and design followed in this thesis. He uses balance of power theory and organization theory to explain the variance in national doctrines of France, Britain, and Germany before the Second World War. This thesis will differ from Posen's work in two ways.

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[16]See Robert Jervis, "Cooperation Under the Security Dilemma," World Politics 30 (January 1978): 167-214 and George Quester, Offense and Defense in the International System (New York: Wiley, 1976).

[17]Barry Posen, The Sources of Military Doctrine: France, Britain, and Germany Between the World Wars (Ithaca, NY: Cornell University Press, 1984).

First, Posen is really trying to prove that balance of power theory (or systemic analysis) is more powerful than organization theory (or unit level analysis). This explicit agenda distorts his analysis and limits the value of his conclusions about doctrinal change. This thesis will focus exclusively on identifying and weighing the determinants of doctrinal change.

Second, Posen concludes that balance of power theory provides the most complete explanation of doctrinal change. This thesis assumes that the two approaches are complementary and that the best explanation would integrate both theories. While balance of power theory is dominant in explaining doctrinal change in Europe in the interwar period, this thesis argues that organizational theory better explains doctrinal innovation by the U.S. Army since the mid-seventies. This thesis reveals, therefore, that the relationship between the two theories varies over time and space and that a complete explanation must accurately assess the relative weights of these two macro-theories.

Jack Snyder, in The Ideology of the Offensive,[18] attributes the evolution of European military doctrines prior to the First World War to organizational politics and cognitive biases. He develops a compelling explanation for

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[18] Jack Snyder, The Ideology of the Offensive: Military Decision Making and the Disasters of 1914 (Ithaca, NY: Cornell University Press, 1984).

14

why armies tend to prefer offensive doctrine, and explores the conditions that allow this bias to dominate doctrine. His theme will figure prominently in this thesis. By focusing on a single country, however, this thesis will hold geography and national culture constant, thereby better isolating organizational and psychological variables. Since U.S. Army doctrine varies between a defensive and an offensive emphasis during the last two decades, this thesis will be able to weigh the influence of organizational and cognitive biases. It will examine periods when an institutional preference for the offense was subordinated to operational requirements, as well as periods when the institutional preference dominated. This thesis will, therefore, be able to identify the conditions which allow institutional preferences, reinforced by cognitive biases, to dominate decision-making. Snyder's analysis cannot.

Both Posen and Snyder treat the military as a unitary whole. They explain national military doctrines, not the doctrines of services, as this thesis will try to do. Interservice rivalry, though a prominent force in the evolution of U.S. Army doctrine, is absent from their studies. Ken Allard, in <u>Command, Control, and the Common Defense</u>,[19] demonstrates that unique service paradigms and

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[19]C. Kenneth Allard, <u>Command, Control, and the Common Defense</u> (New Haven, CT: Yale University Press, 1990).

15

interservice rivalries shape service doctrines while
frustrating efforts to devise joint solutions. Asa Clark,
in a chapter of The Defense Reform Debate,[20] goes a step
further, arguing that interservice rivalry can and has
sufficiently threatened a military organization to spark
doctrinal reform. While Posen's broad brush treatment of
organizational politics best explains organizational
inertia, and Snyder's analysis explains a persistent
preference for the offense, Clark's analysis shows a
threatened organization may be innovative and may even
disregard its offensive preference. This thesis expands on
Clark's work.

A number of studies explain change in U.S. Army
doctrine during other periods. The pentomic era attracts a
great deal of attention, probably because the era of the
atomic soldier seems so curious in retrospect.[21] These
studies tend to emphasize the weight of external factors:
technology (the advent of nuclear weapons), interservice
rivalry (the rise of the Air Force), strategy (massive
retaliation replacing conventional defense), and national

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[20]Asa A. Clark IV, "Interservice Rivalry and Military
Reform," in The Defense Reform Debate, ed. Asa A. Clark et
al, (Baltimore, MD: The Johns Hopkins University Press,
1984): 250-271.

[21]See for example: A. J. Bacevich, The Pentomic Era
(Washington, D.C.: National defense University Press, 1986)
or Donald Alan Carter, "From GI to Atomic Soldier" (Ph. D.
dissertation, Ohio State University, 1987).

16

politics (changing priorities in executive and legislative branch resulting in reduced funding and lower manpower ceilings). They provide a good model for parts of the thesis. Stephen Bowman, takes a similar approach in his analysis of the development of U.S. Army counterinsurgency doctrine.[22] Bowman's unique contribution is a deliberate analysis of the distortion that is injected into doctrine when external forces drive the change. While these works provide a model of how to proceed, none deals with the same period as this thesis, and none spans the full breadth of variables.

Methodology

This thesis is fundamentally deductive. By a historical survey, this thesis identifies the independent variables that have explained doctrinal change in the past. It then formulates hypotheses that postulate a relationship between the identified variables and doctrinal change. It tests the hypotheses across the four revisions of FM 100-5. When covariation seems to confirm the relationship, the decision process is traced in detail in an attempt to establish causation.

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[22]Stephen Lee Bowman, "The Evolution of U.S. Army Doctrine for Counterinsurgency Warfare: From World War II to the Commitment of Combat Units in Vietnam" (Ph. D. dissertation, Duke University, 1985).

17

The Dependent Variable

The dependent variable is U.S. Army doctrine from
1973 to present. Enumerating the revisions is not
sufficient. This thesis must characterize each phase of
doctrine so that we can assess the impact of change in an
independent variable on the content of doctrine. This
thesis is interested in explaining not only that a change
occurs, but the specific nature of the change, the direction
doctrine takes.

Doctrine has been defined variously as a set of
authoritative guidelines on the conduct of war, a consensus
on the state of the operational art, a description of how an
Army fights or intends to fight, or a lexicon of military
terms. The U.S. Army's fundamental doctrinal publication is
FM 100-5. Beginning with the 1976 edition, the senior
leadership of the Army explicitly sought, by revisions of
this manual, to shape the Army through its doctrine. They
aspired to spanning and reconciling all four definitions of
doctrine. FM 100-5 is the best single source on U.S. Army
doctrine. Its discrete revisions best mark the evolution of
U.S. Army doctrine across time.

To characterize the change in doctrine, this thesis
first contrasts the old and the new versions of this key
manual. To appreciate the subtle nuances of each change,
however, it goes beyond a direct comparison of the doctrinal
manuals and considers doctrine as it is marketed, understood

in the field, trained in the schools, and employed in acquisition and force structure decisions. The thesis necessarily takes into account the way each edition was promoted and the debate each provoked. Only by considering this broader range of indicators can we discover the sometimes slight but consequential tonal shifts that are hidden in the sanitized language of the manuals. Chapter 2 is dedicated to the full exposition of the dependent variable.

The Independent Variables

Political scientists explain the behavior of complex organizations in two fundamental ways: systemic and unit level analysis.[23] Neither is sufficient alone. A thorough explanation of an organization's behavior often begins with a systemic analysis, because it is the most economical, but in the end resorts to a unit level analysis, because it provides the most complete explanation.

The first explanatory method, systemic analysis, treats the organization as a unitary, rational whole. The behavior of the organization is logically determined by the environment or system in which it operates. To predict the

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[23]See for example Kenneth N. Waltz, "Reductionist and Systemic Theories," in Robert O. Keohane, ed., Neorealism and Its Critics (New York: Columbia University Press, 1986): 47-69. "Reductionist" is hardly a neutral label; it reveals Waltz's distrust of that body of theory. I use a more neutral label - "unit level."

behavior of an organization by a systemic analysis, the political scientist studies factors external to the organization. In a systemic analysis, external variables determine the behavior of organizations.

Michael Howard provides a handy image of the external variables that traditionally explain doctrinal evolution. He contends that doctrine results from a "triangular dialogue" between "operational requirement, technological feasibility, and financial capability."[24] This thesis will evaluate the role of all three vertices of Howard's triangle. It will flesh out "operational requirement" to include two component parts: the threat and the national strategy (which determines the Army's missions and the level of resources). Since nothing generates more pressure for change than demonstrated failure in war, this thesis will evaluate whether success or failure in combat has triggered the change in the Army's doctrine.

The second method of analysis, unit level analysis, assumes that different organizations will respond differently to the same external stimuli. Organizations behave in a particularistic manner that undercuts any analysis that assumes organizations are similarly rational.

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[24]Michael Howard, "Military Science in an Age of Peace," RUSI, Journal of the Royal United Services Institute for Defence Studies 119 (March 1974): 5.

Indeed large bureaucratic organizations often behave in a sub-optimal, less than perfectly rational manner.

To explain the behavior of an organization, the unit level analyst must look beyond external factors and focus instead upon internal factors. Political scientists use two bodies of theory to explain the particularistic behavior of organizations: the theory of organizations and the theory of bureaucratic politics.[25] Both theories contend that the way a decision is made colors the nature of the decision. Organization theory assumes organizational interests and process bias decisions; bureaucratic politics theory assumes personal interests, parochial perspectives, and the unequal distribution of influence bias decisions.

Organization theory explains the change in doctrine by identifying the organizational interests that are served by the change. The Army may innovate to stave off a reduction, in absolute or relative terms, in its budget or manpower ceiling. It may innovate to reduce uncertainty or increase its autonomy. It may innovate to protect, as it opposes reforms that threaten, its organizational essence. Finally, it may innovate to simplify running the organization.

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[25]Graham T. Allison, The Essence of Decision (Boston: Little, Brown and Company, 1971), Chapters 3 and 5.

Organization theory claims the process used to decide and implement doctrine ends up shaping the doctrine itself. The degree of centralization and the method used to validate the doctrine influence the content of doctrine.

According to bureaucratic politics theory, a decision is a negotiated compromise between self-interested participants who use their positional power to promote their interests. According to this theory, doctrine is shaped by the personal interests of key decision-makers. Doctrine does not reflect the best available thought on how to fight and win. Rather, doctrine is a compromise between the many proponents and advocates. The inclusion of an idea in the final compromise reflects the power of the idea's proponent more than the objective merits of the idea. Bureaucratic politics theory attributes change in doctrine to the changing leadership of the Army and the changing balance of power between the competing proponents.

Bureaucratic politics theory takes us to the level of the individual decision-maker. Psychologists argue that humans are rarely objective. Formative experiences uniquely alter the way every individual perceives his environment. To evade cognitive dissonance, decisionmakers filter information in a biased manner and slip into wishful

thinking.[26] To the extent that individuals influence doctrine, individual biases and intellectual errors distort doctrine.

In Chapter 3 and 4, this thesis will evaluate the external and the internal variables, respectively, that caused doctrinal change from the Active Defense to AirLand Battle and beyond. Each section will begin by positing a hypothetical relationship between the independent and the dependent variable. Whenever possible, the thesis will confirm the relevance of the hypothesis by providing a historical example that is more completely documented or more widely accepted. It will then track the independent variable across the four turn points in doctrine. If changes in the dependent variable and independent variable do not correlate, we can reject the hypothesis. We should discount that independent variable, confident that it plays no significant role in explaining the evolution of doctrine in recent years. If the dependent and independent variables co-vary, we have reason to suspect the hypothesis may be true. Through causal tracing, the thesis will try to establish whether the covariation reflects a causal relationship between the independent variable and the

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[26]See Alexander George, <u>Presidential Decisionmaking in Foreign Policy: The Effective Use of Information and Advice</u> (Boulder, CO: Westview Press, 1980), Chapter 2 and Snyder, 25-30.

dependent variable. If we find evidence of a causal relationship, we can be confident that the change in doctrine is partially explained by the independent variable.

In Chapter 5, the thesis will summarize the analysis by comprehensively explaining each revision of doctrine in chronological order. It will then offer some tentative conclusions about the causes of doctrinal change since the mid-seventies.

CHAPTER 2

THE CHANGE IN DOCTRINE

The change in doctrine from Active Defense to
AirLand Battle Future is both evolutionary and
revolutionary. Some elements of the doctrine, the tenet
"synchronization"[1] for example, first appear in the 1976
edition of FM 100-5 and then evolve gradually in subsequent
editions. Each edition, however, also includes unique
elements that clearly distinguish it from preceding and
subsequent editions. The editions in 1976 and 1982 include
changes of such significance that they revolutionized
doctrine. This chapter will characterize each edition and
capture its revolutionary aspects in a few handy, yet
accurate, phrases to simplify the analysis in the following
chapter.

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[1] The term "synchronization" appears once in the 1976
edition of FM 100-5. U.S. Army, FM 100-5, Operations
(Washington, D.C.: Department of the Army, 1 July 1976), 3-
8. It is one of the four "tenets" of AirLand Battle
doctrine in the 1986 edition. U.S. Army, FM 100-5,
Operations (Washington, D.C.: Department of the Army, 5 May
1986), 17.

Indicators

JCS Pub 1-01 defines doctrine as the "fundamental principles by which military forces guide their actions in support of national objectives. It is authoritative but requires judgment in application."[2] If doctrine is authoritative, then it must be captured in official documents. The Army's field manuals are the official expression of doctrine. FM 100-5, Operations is the capstone manual.[3] By comparing and contrasting the editions of FM 100-5 and other derivative field manuals, we can discern the change in authoritative doctrine.

The field manuals, however, are an incomplete guide to doctrine. The balanced composition and neutral prose often conceals the tonal shift that sets each edition apart from all the others. For example, both the 1976 and the 1982 editions of FM 100-5 dedicate a section to the offense and another to the defense. In both editions, the section on the offense precedes the section on the defense. The authors of both manuals insist that the text of the manual

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[2]Joint Chiefs of Staff, JCS Pub 1-01 with Change 1, Joint Doctrine and Joint Tactics, Techniques, and Procedures Development Program (Washington, D.C.: Joint Publication System, 15 April 1988), viii.

[3]FM 100-5, 1976, i.

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favors neither form of war.[4] The 1976 edition, however, is commonly understood to be defensive. This common perception earned the manual its familiar label -- the Active Defense. Similarly, the 1982 edition, AirLand Battle, was widely interpreted as favoring the offense. NATO failed to adopt AirLand Battle as an Alliance doctrine because many West Europeans felt it was too offensive. A careful analysis of the manuals may not be enough.

This thesis will argue that the composition was skewed and the prose, purple in both manuals, contrary to what the authors contend. This thesis will also, however, broaden its analysis to consider other indicators of the Army's doctrine.

General George H. Decker, former Army Chief of Staff, said, "Doctrine provides a military organization with a common philosophy, a common language, a common purpose and a unity of effort."[5] Turning GEN Decker's remark around, we should be able to refine our characterization of doctrine by carefully studying what is "common" in the field army.

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[4]See John L. Romjue, "From Active Defense to AirLand Battle: The Development of Army Doctrine from 1973-1982," TRADOC Historical Monograph Series (Fort Monroe, VA: U.S. Army Training and Doctrine Command, June 1984): 14, and General William R. Richardson, "FM 100-5: The AirLand Battle in 1986," Military Review LXVI.3 (March 1986): 6.

[5]U.S. Army, TRADOC PAM 34-1, Doctrinal Terms: Doctrine, Tactics, Techniques, and Procedures (Fort Monroe, VA: TRADOC, 1984), 16.

Throughout the period of this study, doctrine drives training, acquisition, and force structure. The 1976 edition of FM 100-5 begins,

> This manual sets forth the basic concepts of U.S. Army doctrine. These concepts form the foundation for what is taught in our service schools, and the guide for training and combat developments throughout the Army.[6]

Paul Herbert, writing about the 1976 edition of FM 100-5, defined doctrine as "an approved, shared idea about the conduct of warfare that undergirds an army's planning, organization, training, leadership style, tactics, weapons, and equipment."[7] These characteristics and functions of an army derive from and, therefore, should reflect doctrine.

The connection between doctrine, training, and force development grew stronger in subsequent editions. During the eighties, the U.S. Army established the Concept-Based Requirements System (CBRS). This system places concepts, or doctrine, at the center of combat development. The connection is unmistakable in the 1986 edition of FM 100-5 which states, "Tactics, techniques, procedures, organizations, support structures, equipment and training must all derive from [doctrine]."[8]

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[6] FM 100-5, 1976, i.

[7] Paul H. Herbert, "Deciding What Has to Be Done: General William E. DePuy and the 1976 Edition of FM 100-5, Operations," Leavenworth Papers 16 (July 1988): 3.

[8] FM 100-5, 1986, 6.

Since doctrine is the origin of the Army's tactics, force structure, equipment, and training, a change in doctrine should provoke change in these areas. Conversely, the nature of the change in these areas should disclose the precise nature of the doctrinal change that caused it. For example, both the 1976 and 1982 editions of FM 100-5 address war in Europe and in other theaters. The 1982 edition seems to place greater emphasis on contingencies outside Europe than the 1976 edition had. That suspicion is confirmed by the Army of Excellence (AOE) restructuring, begun in 1983. AOE significantly altered the U.S. Army force structure to facilitate deployment by air, a capability that is not required for Europe. By studying the evolution of the Army's force structure, tactics, training, and equipment, we can better ascertain doctrine during each period.

AirLand Battle Future is not yet published, and its impact on the Army is not yet evident. However, the marketing campaign has begun. Just before the Army publishes a new manual, particularly a manual as consequential as FM 100-5, TRADOC whets the Army's appetite with journal articles that sketch out the key elements and projected consequences of the emerging doctrine.[9] When the

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[9]See for example, MG Stephen Silvasy, Jr., "AirLand Battle Future: The Tactical Battlefield," Military Review LXXI.2 (February 1991): 2-12 and GEN John W. Foss, "AirLand Battle Future," Army 41.2 (February 1991): 20-37.

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articles are authored by the TRADOC Commander and his Deputy Chief of Staff for Doctrine, it is safe to assume the articles are authoritative.

Revolutionary Changes

The 1976 and 1982 editions of FM 100-5 introduced concepts that radically depart from previous doctrines. AirLand Battle Future places greater emphasis on non-linear warfare than any preceding doctrine. The doctrinal change associated with each of these three versions is truly revolutionary.

Active Defense

The 1976 edition of FM 100-5 is easily distinguished from the field manuals that preceded it. Previous editions were titled Field Service Regulations -- Operations. In 1976, the title was reduced to simply Operations. Since well before World War II, the Army's field manuals were published with a bland, formal cover. A distinctive camouflage pattern served as the background for the cover of the 1976 edition. Previous field manuals had an official layout. The format was formal and unremarkable. The 1976 edition was filled with pictures, insets, graphs, and charts. The text was printed in two colors and a wide range of fonts. Bullets and boxes drew the reader's attention to key passages.

The content of the manual is as distinctive as its format. The 1976 edition is, in many ways, unique.

Attrition

Two bodies of theory dominate the analysis of warfare: attrition theory and maneuver theory.[10] The 1976 edition of FM 100-5 marks the apogee of attrition theory's influence over U.S. Army doctrine after the Second World War.[11]

A doctrine inspired by the attrition theory of warfare will seek to destroy the enemy, while a maneuverist doctrine will seek the enemy's dislocation.[12] The maneuverist targets the enemy's will to fight; the attrition theorist targets the enemy's weapons.

The 1976 edition revealed its true colors in the first chapter, "The purpose of military operations, and the focus of this manual, is to describe how the U.S. Army destroys enemy military forces and secures or defends

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[10]For a concise explanation of the two schools see Richard E. Simpkin, Race to the Swift: Thoughts on Twenty-First Century Warfare (London: Brassey's Defence Publishers, 1985), 19-23.

[11]Robert A. Doughty reached this conclusion in his study of U.S. Army doctrine since World War II. See Robert A. Doughty, "The Evolution of U.S. Army Tactical Doctrine, 1946-1976," Leavenworth Papers 1 (August 1979), 49.

[12]Simpkin, Figure 3, 21.

important geographic objectives."[13] The first purpose of offensive operations is to "destroy enemy forces." "Destroying [the enemy's] will to continue the battle" is merely a part of the third purpose of the offensive.[14] The purpose of the defense is to "destroy the masses of enemy armored vehicles in the assault."[15] This emphasis on destruction of enemy forces recurred throughout the manual.

Attrition theorists emphasize force ratios. The 1976 edition of FM 100-5 was the first and last to use explicitly force ratios. The manual provided force ratios to guide the commander as he concentrates combat power in the offense or defense. For example, it warned that a defending force can defeat an attacker three times more powerful, but an attacking force must concentrate six times as much combat power as the defender to have a good chance of success.[16]

Attrition theorists advise commanders to seek battles that would yield favorable exchange rates. The 1976 edition told the commander to attack "only if he expects the eventual outcome to result in decisively greater enemy

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[13]FM 100-5, 1976, 1-2.

[14]FM 100-5, 1976, 4-1.

[15]FM 100-5, 1976, 5-3.

[16]FM 100-5, 1976, 3-4.

losses than his own, or result in the capture of objectives crucial to the outcome of the larger battle."[17]

The dominance of attrition theory is evident in the Active Defense. Doctrines inspired by attrition theory stress firepower rather than maneuver, favor the defense over the offense, and focus on weapon systems rather than soldiers. All three tendencies are conspicuous in the Active Defense.

Firepower

The 1976 edition of FM 100-5 focused on firepower to the exclusion of maneuver. The authors contended that the "new lethality"[18] of modern weapons transformed the battlefield and justified their emphasis on firepower.

The emphasis on firepower is evident throughout the manual. All four "prerequisites" to victory in battle aim at maximizing the effectiveness of fires.[19] In bold letters, the manual affirmed, "Massive and violent firepower is a chief ingredient of combat power."[20] The manual advised that, "The skillful commander substitutes firepower

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[17] FM 100-5, 1976, 4-3. Italics added.

[18] This slogan first appears on page 2-1, FM 100-5, 1976.

[19] FM 100-5, 1976 3-3.

[20] FM 100-5, 1976, 3-5.

33

for manpower whenever he can do so."[21] It discouraged commanders from securing a terrain feature by maneuver when adequate control over the terrain could be achieved by fires alone.[22] It called suppression, and particularly suppression with direct fire weapons, the "fundamental technique upon which success or failure is almost wholly dependent: . . ."[23] No previous edition placed as great an emphasis on firepower.

Previous editions of FM 100-5 struck a balance between firepower and maneuver. The 1976 edition subordinated maneuver to firepower. In the new doctrine, units maneuvered to concentrate combat power. Weapon systems moved to firing positions that enhanced the lethality of their fires. Maneuver alone achieved nothing, according to the 1976 edition.

Manned Weapon Systems

Whereas previous doctrines guided the employment of armed men, the Active Defense offered guidelines for the employment of manned weapon systems. The contrast between the 1976 edition of FM 100-5 and preceding editions is striking.

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[21] FM 100-5, 1976, 3-4.

[22] FM 100-5, 1976, 5-7.

[23] FM 100-5, 1976, 3-13.

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The 1968 edition of FM 100-5 opined that, "Despite the advances in technology, man remains the most essential element on the battlefield."[24] The 1941 edition had even affirmed that man was the "decisive element."[25] These earlier manuals argued that battlefield effectiveness derived from leadership that understood the human dimensions of war.

The authors of the Active Defense reached a very different conclusion. They argued that,

> Overall battlefield effectiveness depends on weapons capability, the proficiency of teams or crews, and the tactics or techniques of the commander. Thus the US Army must obtain powerful weapons, develop fully the proficiency of the men who man them, and train leaders capable of employing weapons and crews to best effect.[26]

The quality of the soldier was no more important than his weapon's capability and emplacement. The measure of a good soldier was not his morale or fighting spirit or even initiative. Rather, the 1976 edition of FM 100-5 told commanders to value soldiers according to their proficiency, their gunnery skills.

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[24]U.S. Army, FM 100-5, _Field Service Regulations -- Operations_ (Washington, D.C.: Headquarters, Department of the Army, September, 1968), 3-1.

[25]U.S. Army, FM 100-5, _Field Service Regulations -- Operations_ (Washington, D.C.: Headquarters, Department of the Army, 22 May 1941), 18.

[26]FM 100-5, 1976, 1-3. Italics were used in the cited manual.

Chapter 2 was devoted to a detailed analysis of the lethality of the various weapon systems. Previous field manuals did not include a comparable chapter. The chapter concluded,

> The leader of the modern battlefield must be an expert in weapons effects and employment -- both his own and those of his enemy. War is becoming increasingly complex. Morale and motivation must be backed up in weapons and tactical proficiency.[27]

The authors admitted that modern combat required "courage, audacity, confidence, and stamina," but stressed that "tactical and technical proficiency is equally important."[28] No previous manual gave comparable stature to technical skill.

How to fight

The 1976 edition of FM 100-5 had a distinctly tactical and technical perspective. It marked the beginning of a transition by the U.S. Army to manuals that would tell the field army specifically "how to fight."[29]

The 1976 edition went further than preceding manuals in providing detailed guidance to the soldier and commander. For example, tank commanders were told to avoid duels with antitank guided missiles at ranges beyond 2,000 meters,

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[27] FM 100-5, 1976, 2-32.

[28] FM 100-5, 1976, 3-2.

[29] FM 100-5, 1976, B-1.

aviators were given quarterly data on cloud ceilings and fog, and artillerists were told to use delayed action fuzes in urban areas.[30] The capstone _Operations_ manual had never before gone into this level of detail.

The derivative manuals followed the example set by the 1976 edition of FM 100-5 and went into increasingly detailed prescriptions.[31] The U.S. Army commonly referred to the derivative manuals as "how to fight" manuals, a practice that has persisted ever since.

Two training innovations in the late seventies confirm the technical view of war espoused in the 1976 edition of FM 100-5. The Army Training and Evaluation Program (ARTEP), introduced as the 1976 edition of FM 100-5 was being written, reduced combat to discrete and testable tasks that platoons, companies, and battalions performed. Similarly, Performance Oriented Training (POT) reduced soldiering to discrete and testable individual skills. These innovations, like the doctrine that inspired them, reveal the underlying assumption that battlefield effectiveness rests first and foremost upon the technical proficiency of soldiers and units.

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[30] FM 100-5, 1976, 3-11 to 3-17, 13-10 to 13-12, and 14-5.

[31] For a typical example, see U.S. Army, FM 90-10, _Military Operations on Urbanized Terrain (MOUT)_ (Washington, D.C.: Headquarters, Department of the Army, 15 August 1979), Appendices C and D.

Defense

Previous manuals favored the offense; the 1976 edition clearly favored the defense. Critics of the Active Defense spent most of their time condemning this departure from tradition.

In a fairly traditional passage, the 1968 edition of FM 100-5 argued that,

> Offensive action is necessary to achieve decisive results and to maintain freedom of action. It permits the commander to exercise initiative and impose his will on the enemy, . . . The defensive may be forced on the commander, but it should be deliberately adopted only as a temporary expedient while awaiting an opportunity for offensive action or for the purpose of economizing forces on a front where a decision is not sought. Even on the defensive, the commander seeks every opportunity to seize the initiative and achieve decisive results by offensive action.[32]

A similar passage appeared in every edition from 1941 through 1968, with one exception. The 1954 edition, associated with the pentomic division and the atomic soldier, was less enthusiastic about the offense. Even that edition, however, cannot match the 1976 edition's defensive bent.

The 1968 edition underlined the greater difficulty of defensive operations:

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[32] FM 100-5, 1968, 5-1.

The conduct of defensive operations under adverse
conditions is the supreme test of the field
commander. The defender must fully use those
advantages that he possesses and can improvise. He
must take greater risks and conserve his resources,
yet commit them unhesitatingly and decisively at the
proper time. He must deal with the serious problems
of leading troops without the evident success of
offensive combat. The highest order of leadership
and tactical skill is demanded. [33]

The authors baldly stated that, "Offensive actions are

preferred to defensive actions . . . ."[34]

The 1976 edition, in contrast, carefully enumerated

the "built-in advantages" of the defense:

Full use of cover and concealment, selection of the
ground on which to fight, weapons sited for maximum
effectiveness, reinforcement of terrain with mines
and obstacles, and the choice of firing first.[35]

"In fact," the manual argued, "the defender has every

advantage but one -- he does not have the initiative."[36]

The 1976 edition also points out the disadvantages

of the offense.

The attacker, . . . , must expose his force by
moving to contact, must fight on ground selected by
the defender, must clear mines and obstacles while
under fire, and must destroy or suppress weapons
which have taken full advantage of cover and
concealment.[37]

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[33]FM 100-5, 1968, 6-13 and 6-14.

[34]FM 100-5, 1968, 6-5.

[35]FM 100-5, 1976, 3-4.

[36]FM 100-5, 1976, 5-2.

[37]FM 100-5, 1976, 3-4.

The manual warned the attacking commander to steel himself against the high losses he might suffer.[38]

Force modernization and training confirm the defensive orientation of doctrine in the late seventies. The new family of armored vehicles increased the staying power of U.S. Army units. The M-1 Abrams tank and the M-2 and M-3 Bradley fighting vehicle represented a major leap in lethality and crew protection. These vehicles give defending forces the ability to hold ground even when bombarded by Soviet artillery. The TOW missile on the Bradley can only be fired when the vehicle is stationary. Its slow flight speed and pronounced signature require the firing vehicle to be occupy a battle position that affords good cover and concealment. The TOW missile is optimally employed in the defense.

Similarly, the Army invested heavily in countermobility in the late seventies, neglecting mobility needs. A family of scatterable mines and a wide array of delivery/emplacement systems were developed in the late seventies and early eighties. No new mobility systems were introduced in the same time frame. This focus on countermobility is consistent with a defensive doctrine.

Finally, the publication of the 1976 edition coincides with an increased emphasis on training defensive

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[38] FM 100-5, 1976, 4-2.

operations in the field army.[39]   The defensive bent of the
1976 edition of FM 100-5 is apparent in both the text of the
manual and the aftershocks in the Army.

Active Defense, A Linear Defense

The 1976 edition broke with tradition by favoring
the defense.   The defense it proposed was also
untraditional.

Previous editions had defined two types of defensive
operations.   The 1968 edition of FM 100-5 referred to them
as the mobile and area defense.   In the 1976 edition, only
one defense is described -- the active defense.[40]

The Active Defense divided the battlefield into
three zones: the covering force area, the main battle area,
and the rear area.   The covering force fights aggressively
to force the enemy to deploy and reveal his main attack.
Severely outnumbered, the covering force "trades space for
time."

The forces in the main battle area use the time to
concentrate combat power opposite the enemy's main attack.
A division commander must be willing to concentrate two-
thirds or more of his combat power on one-fifth of his
frontage.   The Active Defense requires commanders to

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[39]Doughty, 44.   It also conforms with my personal
experience in the mid and late seventies.

[40]FM 100-5, 1976, Chapter 5.

41

identify the enemy's main effort, concentrate against it, and accept risk by defending everywhere else with the minimum force possible.

A reserve, a standard element in every previous defensive doctrine, is noticeably absent. All forces are deployed well forward in the main battle area. The authors, focused on "fighting outnumbered,"[41] believed that the defending force had to get every gun into the fight. Counterattacks were discouraged. When unavoidable, they should be short and confined to the reverse slope of a ridge.

The rear area is dedicated to logistics. Forces in the rear area must defend themselves as much as possible.

"The defense must be elastic -- not brittle."[42] The defender may allow the enemy to penetrate into the main battle area, but he must maintain a continuous and coherent line of contact. Too deep a penetration risks allowing a breakthrough (which is presumably ruinous) and complicates flank coordination between adjacent units.

This conceptualization of the main battle fight reveals that the Active Defense was a linear defense. This is consistent with the theoretical origin of the doctrine. Attrition theory posits a relationship between force ratios,

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[41] FM 100-5, 1976, 1-2.

[42] FM 100-5, 1976, 5-13.

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casualty rates, and the movement of the line of contact. The Active Defense doctrine, derived from attrition theory, presents a linear view of warfare.

Terrain

The effective use of terrain was emphasized more in the 1976 edition of FM 100-5 than in the preceding manuals. According to the authors of the 1976 edition,

> Terrain, . . . , provides a combat equalizer or multiplier when the tactician uses its strengths and reinforces its natural advantages through mining, barriers, and other obstacles.[43]

They further argued that cover and concealment were fundamental to success on the highly lethal, modern battlefield. They warned that, "Failure to make full protective use of the terrain can prove fatal."[44] The heightened importance of terrain is consistent with the defensive bias and firepower approach of Active Defense.

European emphasis

The Active Defense focused on the European theater, more than any preceding doctrine. An entire chapter was dedicated to "Operations within NATO." In the chapter dedicated to "Special Environments," the largest section concerned military operations in urban terrain, inspired by

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[43]FM 100-5, 1976, 3-3.

[44]FM 100-5, 1976, 3-3.

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European urban sprawl. No other geographic region was addressed explicitly.

The European focus was evident throughout the manual. Whenever the authors needed an example they turned to Europe. For example, all comparisons of weapon systems and tactics placed U.S. against Soviet.

The Active Defense was designed to answer the challenge of battle in Central Europe. The manual told commanders to prepare to "fight outnumbered," to "combat forces with ultra-modern weapons, greater numbers, and nearby supply sources."[45] The manual identified battle in Central Europe against forces of the Warsaw Pact as the most challenging scenario; this scenario inspired the Active Defense.

The dominance of the European scenario was evident in force development in the late seventies as well. The U.S. Army modernized its heavy forces, but gave little thought to strategic deployment of that force. The battle in Central Europe required heavy, modern weapon systems. Since the U.S. Army was forward deployed in Europe, strategic lift was not an immediate concern. These force development choices confirm the doctrinal focus on Europe.

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[45]FM 100-5, 1976, 1-2.

First Battle

The Active Defense focused commanders on winning the first battle of the next war. This emphasis was unprecedented. The importance of the first battle was explained on the first page of the manual:

> Because the lethality of modern weapons continues to increase sharply, we can expect very high losses to occur in short periods of time. Entire forces could be destroyed quickly if they are improperly employed. Therefore the first battle of our next war could well be its last battle: belligerents could be quickly exhausted, and international pressures to stop fighting could bring about an early cessation of hostilities. The United States could find itself in a short, intense war -- the outcome of which could be dictated by the results of initial combat. . . . Today the US Army must, above all else, **prepare to win the first battle of the next war.**[46]

This passage was doubly remarkable.

First, the Active Defense told commanders that they would not have time to mobilize for the next war. They had to be ready to fight. The Active Defense emphasized peacetime readiness more than any previous doctrine.

Second, the Active Defense emphasized winning the first battle, because domestic support might evaporate and international diplomacy might intervene before a decisive outcome is achieved on the battlefield. In fact the passage has a third meaning: early success may precipitate a negotiated solution. In fact, an outnumbered force might

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[46] FM 100-5, 1976, 1-1. Italics were used in the cited manual.

hope that high initial casualties would discourage an aggressor. The aggressor might abandon the effort, even if the continued battle at those exchange rates would have eventually defeated the defender. The manuals of the sixties had introduced the spectrum of conflict and the concept of limited war, but they assumed that once political leaders resorted to war, the outcome would be decided by battle. Active Defense admitted that political forces may prevent limited wars from being decisive and prevent battlefield commanders from achieving decisive military outcomes.

The Active Defense was revolutionary in many ways. Grounded in attrition theory, emphasizing firepower, favoring the defense, focusing on Europe and the first battle, and taking a technical view of war, the Active Defense broke cleanly with previous doctrines. In six years, well before the Army had been able to assimilate all these changes, FM 100-5 launched another revolution -- AirLand Battle.

AirLand Battle

The 1976 edition of FM 100-5 was easily distinguished by its cover, its format, and its illustrations. The 1982 edition followed this example. The format of the 1982 edition was, however, distinctive in one way. The 1976 edition was filled with numerical analysis,

graphs, and charts. There was only one graph in the 1982 edition.[47]

The authors instead used history to persuade and convince the field army. Historical examples peppered the text.[48] Two case histories were fully developed. The Battle of Vicksburg demonstrated the fundamentals of the offense; the Battle of Tannenburg, the fundamentals of the defense.[49] No historical examples were used in the 1976 edition. In Chapter 2, the authors tracked the evolution of weapon lethality since the Second World War, but they never reasoned by historical analogy. This was the method of reasoning that dominated in the 1982 edition. Editions that predate the 1976 edition often included a chapter that developed an historical example, but none had relied as directly as the 1982 edition on historical example to convey and defend the intent of the doctrine.

The authors of the 1982 edition also relied heavily on the military theorists of the past. Erudite quotations from Clausewitz, Sun Tzu, and many other military theorists from the past were highlighted in the margins of the 1982

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[47]U.S. Army, FM 100-5, Operations (Washington, D.C.: Department of the Army, 20 August 1982), 7-9. The graph is actually an artist's conception of the risk analysis for massing troops in a nuclear and conventional environment.

[48]Examples can be found on pages 3-1, 3-5, and 3-7, FM 100-5, 1982.

[49]FM 100-5, 1982, 8-1 to 8-3 and 10-1 to 10-2.

edition.[50] The principles of war, which figured in training regulations and field manuals since the early twenties, were left out of the 1976 edition. The principles recovered their place of honor in the 1982 edition. The 1982 edition advanced seven new combat imperatives, but explicitly drew the connection between these imperatives and the traditional principles of war.[51] The authors of the AirLand Battle doctrine took great pains to place their edition in the historical continuum of military doctrine.

More than methodology distinguished the 1982 edition from the 1976 edition. The 1982 edition rejected much of the substance of the Active Defense doctrine. AirLand Battle derived from maneuver theory, not attrition theory; it focused on maneuver rather than firepower; it stressed the human dimensions of war instead of the technical; and it favored the offense over the defense. The 1982 edition was as different from the 1976 edition as the 1976 edition had been from the Army's doctrinal tradition. In many ways, AirLand Battle doctrine was a return to the Army's doctrinal tradition. While the 1982 edition looked more like the 1976 edition, it had more in common substantively with the doctrines that preceded the Active Defense. For that

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[50]For example see FM 100-5, 1982, 1-4, 2-1, and 8-4.

[51]FM 100-5, 1982, 2-6 to 2-10.

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reason, many of the revolutionary changes in AirLand Battle are more accurately characterized as reactionary.

AirLand Battle also included some true innovations. Its emphasis on the deep battle and the delineation of an operational level of war were unprecedented in U.S. Army doctrine.

Maneuver

While the 1976 edition of FM 100-5 was based on attrition theory, the 1982 edition was inspired by maneuver theory. The force ratios that had been so prominent in the 1976 edition were absent from the 1982 edition. Maneuver theory places little stock in force ratios and the numerical analysis associated with attrition theory. The authors of the 1982 edition underscored the limits of the numerical analysis that had justified the Active Defense:

> Force ratios and the effects of fire and maneuver
> are significant in deciding battles; however, a
> number of intangible factors often predominate.
> Among these intangible factors are the state of
> training, troop motivation, leader skill, firmness
> of purpose, and boldness -- the abilities to
> perceive opportunities, to think rapidly, to
> communicate clearly, and to act decisively.[52]

Maneuverists distrust numerical analysis because it does not adequately account for these intangible factors.

Firepower was the centerpiece of the 1976 edition. In the Active Defense, commanders maneuvered to concentrate

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[52]FM 100-5, 1982, 2-4.

fires. The goal was maximizing firepower. Maneuver became the centerpiece of the 1982 edition. In the AirLand Battle doctrine, "Firepower provides the enabling, violent, destructive force essential to successful maneuver."[53] The suppressive effects of direct and indirect fires allowed the commander to maneuver on the highly lethal battlefield. The goal in the AirLand Battle doctrine was to maneuver; firepower merely supported the achievement of that goal.

Consistent with maneuver theory, the 1982 edition encouraged commanders to dislocate the enemy. The manual asserted that, "destruction is the most practical after the enemy has been turned out of a position or is caught in a posture vulnerable to fire."[54] Without maneuver, the 1982 edition argued, the enemy could not be efficiently destroyed by fire.

Consistent with maneuver theory, the AirLand Battle doctrine told commanders to target the will of the enemy, rather than his forces. The 1982 edition of FM 100-5 told the defending commander that "He does not have to kill each enemy tank, squad, or combat system; he has only to destroy the ability of the attacking force to continue fighting."[55] The manual told the attacking commander that,

[53]FM 100-5, 1982, 2-4.

[54]FM 100-5, 1982, 8-4.

[55]FM 100-5, 1982, 11-1.

Attacks that avoid the enemy's strength but shatter
the will of the defending commander or reduce the
fighting capability of his troops are the fastest
and cheapest way of winning.[56]

The manual further explained that,

The enemy's strength depends in part on his numbers
and resources. It also depends on the morale of his
troops, his dispositions, the stability of his
command and control, and the effectiveness of his
combat support and logistic arrangements. Attacking
any of these soft underpinnings can seriously
undermine his ability to fight.[57]

The objective of military operations in the 1976 edition was

the destruction of the enemy forces; the 1982 edition told

commanders to defeat the enemy and warned that destroying

his forces was often an inefficient way of defeating him.

The "indirect approach," popularized by Liddell

Hart, is the essence of maneuver theory. The 1982 edition

repeatedly encouraged the commander to "avoid head on

encounters," to "avoid the enemy's strength and to strike at

his weaknesses."[58] The manual told commanders that,

The best results are obtained when initial blows are
struck against critical units and areas whose loss
will degrade the coherence of enemy operations,
rather than merely against the enemy's leading
formations.[59]

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[56] FM 100-5, 1982, 8-4.

[57] FM 100-5, 1982, 8-7.

[58] FM 100-5, 1982, 7-8.

[59] FM 100-5, 1982, 2-1.

The 1982 edition asserted that, "Accomplished tacticians have consistently preferred well-conceived attacks against weakness rather than force-on-force battles of attrition."[60]

Here and elsewhere in the 1982 edition, the authors seemed as interested in refuting the Active Defense doctrine as explaining the AirLand Battle doctrine.

The theoretical split between the 1976 and 1982 editions caused a number of specific differences in the two doctrines. Many of the differences represent significant practical changes in the way the Army thought about war.

Initiative

Initiative had two meanings in the Active Defense doctrine. It was the only advantage of the attacker, who was most often presumed to be the enemy. It was the capacity to act in the absence of orders, required in every subordinate on a modern battlefield because radio jamming and electromagnetic pulse could prevent the communication of orders. Initiative retained both meanings in the 1982 edition and assumed a much greater prominence.

The 1982 edition of FM 100-5 defined initiative as "the ability to set the terms of battle by action," and considered it "the greatest advantage in war."[61]   In this

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[60]FM 100-5, 1982, 8-4.

[61]FM 100-5, 1982, 7-2.   This text is set off in italics in the original.

way, the 1982 edition returned to a long-standing tradition in Army doctrine. Every edition of FM 100-5 since 1941 affirmed that seizing and retaining the initiative was key to decisive victory in war. The 1968 edition stated flatly that "Commanders should seek every opportunity to gain the initiative."[62] Only the 1976 edition argued that the advantages of the defender outweighed the value of the initiative. The 1982 edition rejected the 1976 break with tradition and re-emphasized the value of gaining and retaining the initiative. In fact, initiative was the first of four basic tenets of AirLand Battle doctrine.[63]

The Active Defense doctrine introduced mission-type orders, commander's intent, and decentralization of responsibility.[64] These three concepts were the keys to fostering initiative in subordinates. These terms were given little emphasis in the text, however. None of the terms, to include the word "initiative," was in italics or bold print, though both were used generously in the 1976 edition. The context of the passage inferred that initiative was only desirable when the orders process was interrupted. More critically, the lateral reinforcement and

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[62] FM 100-5, 1968, 6-5.

[63] FM 100-5, 1982, 2-1 and 2-2.

[64] FM 100-5, 1976, 3-2.

concentration of forces called for in the Active Defense

doctrine assumed a great deal of centralization.

There could be no doubt about the genuine commitment

of the 1982 edition to initiative. It argued that,

> Subordinates must act independently within the
> context of an overall plan. They must exploit
> success boldly and take advantage of unforeseen
> opportunities. They must deviate from the expected
> course of battle without hesitation when
> opportunities arise to expedite the overall mission
> of the higher force. They will take risks, and the
> command must support them. Improvisation,
> initiative, and aggressiveness -- the traits that
> have historically distinguished the American soldier
> -- must be particularly strong in our leaders.[65]

During the eighties, the doctrinal commitment to mission-

type orders, assumption of risk, and operation within the

commander's intent were increasingly stressed in the Army

schools. They were absorbed into the leadership doctrine.[66]

Most recently, the format for field orders was revised to

include a separate paragraph that expresses the commander's

intent. These changes in training, derivative manuals, and

field procedures confirm that the emphasis on initiative in

the doctrine in 1982 is genuine.

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[65]FM 100-5, 1982, 2-2.

[66]See for example U.S. Army, FM 22-103, Leadership and
Command at Senior Levels (Washington, D.C.: Department of
the Army, June 1987), 15.

Momentum

The 1982 edition of FM 100-5 introduces a new element of combat power -- momentum. It is never explicitly defined but it recurs in the text.

The concept of momentum, drawn from maneuver theory, posits a relationship between mass, speed, distance, and combat power. The theory asserts that a smaller unit that moves faster and exercises greater leverage against the lines of communication of a larger opponent enjoys greater momentum and may succeed.[67] There can be little doubt the authors understood the theory. In addressing the virtues of speed in execution, they concluded, "Finally, as it compensates for a lack of mass, speed can provide the momentum necessary for attacks to achieve their aims."[68]

Any field commander knows that momentum favors the attacker. Unless obstacles and fires break the attacker's momentum, a defensive position, even one enjoying a favorable force ratio, may be overrun or bypassed. The Active Defense recommended obstacles covered by fire and defense in depth to absorb momentum. The 1982 edition viewed momentum from the attacker's perspective and included it as an element of combat power that derives from maneuver.

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[67]Simpkin, 94-96.

[68]FM 100-5, 1982, 8-7.

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This formulation of momentum was without precedent in U.S. Army doctrine.

Human factors

The Active Defense focused on weapon systems, AirLand Battle focused on soldiers. According to the 1982 edition,

> Superior combat power depends on three fundamentals. First and foremost, it depends on good people -- soldiers with character and resolve who will win because they simply will not accept losing.[69]

Good weapons came in second, and doctrine was third. In a complete reversal of the Active Defense doctrine, the 1982 edition considered the human dimension of war the predominant one.

> In the final analysis and once the force is engaged, superior combat power derives from the courage of soldiers, the excellence of their training, and the quality of their leadership.[70]

Indeed, the authors seemed to be returning to the doctrine of 1941 which asserted man was the decisive element on the battlefield.

The 1976 edition focused leadership and training on technical proficiency. The 1982 edition focused training as much on building unit morale and confidence as

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[69] FM 100-5, 1982, 1-5.

[70] FM 100-5, 1982, 2-6.

proficiency.[71] The manual claimed, "The primary function of leadership is to inspire and to motivate soldiers to do difficult things in trying circumstances."[72] The 1982 edition told commanders they could only perform this important function if they lead well forward.[73] The contrast with the emphasis on technical and tactical proficiency in the Active Defense doctrine could hardly be more stark.

Offense

In yet another reversal, the 1982 edition of FM 100-5 unequivocally favored the offense over the defense. It stated this predilection clearly: "The offense is the decisive form of war, the commander's only means of attaining a positive goal or of completely destroying an enemy force."[74]

The offensive slant of the manual was apparent in each of the chapters. For example, in analyzing the impact of weather on combat operations, the 1982 edition emphasizes that inclement weather and dark nights favor the attacker.[75]

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[71] FM 100-5, 1982, 1-4.

[72] FM 100-5, 1982, 2-5. This text was in italics in the manual.

[73] FM 100-5, 1982, 9-12.

[74] FM 100-5, 1982, 8-1.

[75] FM 100-5, 1982, Chapter 3.

Its analysis of terrain admits that terrain can hinder movement, but asserts "there are few truly impassable areas."[76] Avenues of approach received as much attention as key terrain in section on terrain analysis. Mobility overtook countermobility as the first purpose of engineer support.[77] These passages reveal the edition's offensive bias.

Even the defense was offensive in the 1982 edition of FM 100-5. The ideal defense, in AirLand Battle doctrine, was conceived as a "shield of blows."[78] In the 1976 edition, the defense was the most efficient way to destroy enemy forces. The 1982 edition gave the defense a much more modest purpose: "The defense denies success to an attacking enemy." The authors hastened to follow up with: "To win, one must attack."[79] The chapter on defense is half the size of the chapter on offense. Much of the chapter on defense is spent telling the defender to employ offensive techniques and maintain an offensive spirit. The 1982 edition clearly saw the defense as a "temporary expedient." The manual told the defending commander "to seek every opportunity to turn

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[76] FM 100-5, 1982, 3-5.

[77] FM 100-5, 1982, 7-19.

[78] FM 100-5, 1982, 11-1.

[79] FM 100-5, 1982, 10-1.

the tables."[80]   Again, the 1982 edition had more in common with the Operations manuals of the forties than the 1976 edition.

Admittedly, the Active Defense called for counterattacks, but they were merely "short counterstrokes." The authors warned, "Sweeping counterattacks which expose our forces to heavy losses as they surrender the advantages of the defender must be the exception."[81]   This falls well short of the offensive spirit the 1982 edition demanded of defending commanders.   Instead, the 1982 edition argued that "A well-executed counterattack to the flanks or rear of an enemy just as he meets a resolute defense to his front can entirely upset his plan."[82]   Whereas the 1976 edition did not provide for a reserve in the defense, the 1982 edition told the commander to keep one third of his force as a reserve.   Its primary purpose was to counterattack.[83]

The Active Defense was preoccupied with fighting outnumbered.   Its solution was to rely on the innate advantages of the defense to multiply the combat power of the smaller forces.   The AirLand Battle doctrine argued that a smaller force can only win if it capitalizes on the

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[80]FM 100-5, 1982, 10-1.

[81]FM 100-5, 1976, 5-7.

[82]FM 100-5, 1982, 10-5.

[83]FM 100-5, 1982, 11-8.

advantages of the offense. The 1982 edition of FM 100-5 stated that by maneuver the attacker gains "the advantages of surprise, psychological shock, position, and momentum which enable smaller forces to defeat larger ones."[84] To win when outnumbered, the Active Defense doctrine prescribed the optimization of firepower in the defense. The AirLand Battle prescribed the full exploitation of the potential value of maneuver and the offense.

Deep Attack

The most significant innovation of the 1982 edition of FM 100-5 is the deep battle. The AirLand Battle doctrine told commanders to fight the enemy through the full depth of his formation. The 1982 edition explained the purpose of the deep battle:

> In the offense, the deep battle initially isolates, immobilizes, and weakens defenders in depth. As the attack continues, it sustains momentum by preventing the reorganization of coherent defenses, by blocking the movement of enemy reserves, and by preventing the escape of defending units. In the defense, the deep battle prevents the enemy from concentrating overwhelming combat power. Its major objectives are to separate and to disrupt attacking echelons to protect the defender's maneuver, and to degrade the enemy's fire support, command and control, communications, combat support, and combat service support.

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[84] FM 100-5, 1982, 2-4.

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Deep battle opens opportunities for decisive action by reducing the enemy's closure rate and creating periods of friendly superiority in order to gain or retain the initiative. If the enemy is prevented from reinforcing his committed forces, even temporarily, he may be defeated piecemeal.[85]

The deep battle could be fought with Air Force Battlefield Air Interdiction (BAI) assets, Army missile systems, artillery, aviation, airborne or airmobile troops, or even mechanized ground forces.

The 1982 edition insisted that the deep battle was the key to defeating a numerically superior force.

The AirLand Battle will be dominated by the force that retains the initiative and, with deep attack and decisive maneuver, destroys its opponent's abilities to fight and to organize in depth.[86]

Commanders were told to plan a deep battle in all operations. "In either attack or defense, timely and well-executed deep actions against enemy forces not yet in contact are necessary for effective operations."[87] While conceding the corps was the "focal point for intelligence collection and distribution," the authors insisted the deep battle was "just as important at division and lower levels."[88]

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[85]FM 100-5, 1982, 7-14.

[86]FM 100-5, 1982, 1-5.

[87]FM 100-5, 1982, 7-13.

[88]FM 100-5, 1982, 7-13.

The attack of enemy second and third echelon formations was foreshadowed in the 1976 edition,[89] but it was considered an Air Force mission, conducted in support of, but not necessarily synchronized with, the ground commander's scheme of maneuver. In the 1982 edition, the deep battle became an integral part of the scheme of maneuver.

The 1976 edition focused commanders on winning the first battle. The emphasis on the deep battle in the 1982 edition reminded commanders that they had to fight and win a series of battles. Admittedly, the deep battle drew assets away from the defeat of the first echelon. Without a deep battle, however, follow-on echelons would reinforce the first echelon before U.S. forces had caught their breath. Without a deep battle, the AirLand Battle doctrine warned, U.S. forces may win the first battle only to lose the next. The authors of the 1982 edition did not expect a premature termination of conflict after both sides had suffered considerable losses. Rather, they expected to fight until a clear victor emerged. They assumed combat would be decisive.

There is ample evidence of the Army's commitment to the deep battle. The Army invested heavily in the development of JSTARS and ATACMS, systems that would allow

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[89]See FM 100-5, 1976, 4-9, 5-8, and 5-9.

the corps commander to detect and strike enemy targets
throughout the depth of his area of influence. Army schools
routinely trained cross-FLOT[90] operations by aviation and
ground maneuver forces and required students to address the
deep battle in operations orders. The deep battle became an
integral part of Army practice.

Nonlinearity

The 1982 edition rejected the linearity of attrition
models. In a section entitled "Nonlinear Maneuver Battles,"
the manual argued,

> Opposing forces will rarely fight along orderly,
> distinct lines. Massive troop concentrations or
> immensely destructive fires will make some
> penetrations by both combatants nearly inevitable.
> This means that linear warfare will most often be a
> temporary condition at best and that distinctions
> between rear and forward areas will be blurred.[91]

The assumption that the battlefield would be nonlinear
provoked two doctrinal changes.

First, cover and concealment was devalued. The
lethality of modern weapons worried the authors of both
doctrines. The solution in 1976 was to maximize cover and
concealment by hugging the terrain. The AirLand Battle
doctrine rejected this solution. It assumed that highly
lethal and accurate fires made stationary and concentrated

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[90]Forward Line of Own Troops (FLOT).

[91]FM 100-5, 1982, 1-2.

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forces vulnerable. It assumed that penetrations would turn

our forces out of their covered and concealed positions.

The AirLand Battle doctrine concluded that maneuver,

dispersion, and deception were the only real protection on

the modern battlefield.

Second, the vulnerability of rear areas was

accentuated. The Active Defense doctrine envisioned two

rear area threats -- lightly armed airborne or airmobile

troops and attack helicopters. The 1976 edition of FM 100-5

recommended that support elements prepare to defend

themselves against these threats.[92] If penetrations are

likely to occur, however, then heavily armored forces may

threaten support elements, and self-defense will not be

adequate. The 1982 edition concluded that the nonlinear

battle required the commander to dedicate combat forces to

the defense of the rear area. Rear area protection, which

had merited a single paragraph in the 1976 edition of FM

100-5, earned a full chapter in the 1982 edition.

Operational Level of War

The 1982 edition defined three levels of war.[93] At

the strategic level a nation's armed forces are employed to

secure the objectives of national policy. At the

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[92]FM 100-5, 1976, 5-14.

[93]FM 100-5, 1982, 2-3.

operational level, military resources are employed to attain strategic goals within a theater of war. At the tactical level, units fight battles and engagements to achieve operational objectives.

The 1976 edition of FM 100-5 also identified three levels when it said generals concentrate the forces, colonels control and direct the battle, and captains fight the battle.[94] All three would qualify as tactical under the criteria established in the 1982 edition of FM 100-5.

The 1982 levels served two purposes. First, it allowed the authors to set aside the strategic level as "beyond the scope of this manual."[95] Since strategy "sets the fundamental conditions for operations,"[96] Army doctrine renounced its role in setting those "fundamental conditions."

Second, it introduced the operational level of war to U.S. Army doctrine. Edward Luttwak distinguished the operational level of war from the tactical level of war in the following way:

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[94]FM 100-5, 1976, 3-4.

[95]FM 100-5, 1982, 2-3.

[96]FM 100-5, 1982, 2-3.

> Just as it is the weapons themselves that interact
> at the technical level . . . , and the forces
> directly opposed that fight one another at the
> tactical level, at the operational level we
> encounter the struggle of the directing minds, as
> expressed in conceptual methods of action . . . .[97]

By demarcating the operational level of war, AirLand Battle doctrine introduced a level of analysis where the moral dimension of war, the contest of wills, could be studied independent of the technical aspects.

How to Think about Fighting

The 1976 edition of FM 100-5 told the Army how to fight. The 1982 edition sought instead to tell the Army how to think about fighting. Where the 1976 edition had prescribed solutions, the 1982 edition raised considerations. For example, the 1976 edition advanced a single method of conducting the defense -- the Active Defense. The 1982 edition of FM 100-5 said pointedly "Army doctrine does not prescribe a single technique for defense."[98] Instead, the manual described a defensive continuum, ranging between two ideal forms -- the static defense and the dynamic defense. Weighing the mission, the enemy, the terrain, the troops at his disposal, and the time available, the commander was told to choose the appropriate balance for his defense plan. The 1982 edition reminded the

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[97]Edward N. Luttwak, Strategy: The Logic of War and Peace (Cambridge, MA: Belknap Press, 1987), 91.

[98]FM 100-5, 1982, 11-9.

commander to retain "an offensive spirit in the conduct of all operations."[99] Furthermore, it emphasized that "Commanders who are flexible rather than mechanical will win decisive victories."[100] A doctrinal solution was deliberately avoided. The AirLand Battle doctrine instead offered guidance on how to think about the defense.

Global focus

The 1976 edition was designed for the battle in Central Europe. The 1982 edition was decidedly global in perspective. Chapter 17, "Combined Operations," spent more time discussing the Pacific theater than Europe. An entire chapter on contingency operations was added. The introduction of sections on unconventional warfare, psychological, ranger, and civil-military operations demonstrated that the 1982 edition thought more about the full spectrum of conflict.[101] The Army of Excellence, discussed earlier in this chapter, restructured the Army to increase its strategic deployability. AOE is strong evidence of the Army's genuine commitment to a more global (less Euro-centric) orientation.

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[99]FM 100-5, 1982, 2-2.

[100]FM 100-5, 1982, 2-7.

[101]FM 100-5, 1982, 7-22 to 7-25.

Integrated Battlefield

The 1976 edition of FM 100-5 addressed nuclear weapons in a separate chapter. The heart and soul of the 1976 edition, Chapter 3, "How to Fight," refers to nuclear weapons only once. That reference underlined the potential of nuclear weapons, when employed by the U.S., "to decisively alter force ratios when and where we choose."[102] The authors did not mention the impact on the nature of war, nor did they apparently consider the use of tactical nuclear weapons by the enemy. In the introductory paragraph of this cornerstone chapter, the authors explained that the purpose of this chapter (and therefore the bulk of the manual) was to explain "How to fight the conventional battle."[103] The authors relegated the discussion of "conventional-nuclear battle" to Chapter 10 and "the problems, tactics, and techniques associated with the conduct of tactical nuclear warfare" to "a separate manual of the 100-series."[104]

Chapter 10 was disappointing. The authors contended, "The use or threatened use of nuclear weapons will significantly influence every phase of the battle, to include purely conventional operations."[105] They further

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[102] FM 100-5, 1982, 3-4.

[103] FM 100-5, 1982, 3-1.

[104] FM 100-5, 1982, 3-1.

[105] FM 100-5, 1982, 10-5.

warned that the use of nuclear weapons "could change the course of battle very quickly."[106] The 1976 edition, however, never specified how the nature of battle would change, in what way the phases of conventional war would be "influenced," the manner in which conventional-nuclear operations differ from purely conventional operations.

The Active Defense doctrine was actually a conventional doctrine. It did not provide a concept for operating on a nuclear battlefield. Indeed, the defensive technique it proposed -- linear defense, lateral movement to concentrate opposite the enemy's main effort -- was particularly vulnerable to nuclear fires. Nuclear fires were much more closely integrated into the AirLand Battle doctrine.

The only graph in the 1982 edition of FM 100-5 was used to explain the transition from conventional to nuclear war.[107] The authors believed that the greater the likelihood of nuclear war, the more hazardous it was to concentrate and to assume static positions. The authors argued that,

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[106]FM 100-5, 1982, 10-5.

[107]FM 100-5, 1982, 7-9.

The destructive effects of nuclear weapons will
increase the tempo of decisive combat. Engagements
will be short and violent. Decisive battles may
last hours instead of weeks and days.[108]

The authors further believed that nuclear fires would open

up the battlefield and create opportunities for maneuver.[109]

In fact, the prospect of enemy use of nuclear weapons

explains in large part the manual's embrace of maneuver

theory.

In the 1982 edition, virtually every chapter

discussed the potential use of nuclear weapons. Commanders

were warned to evaluate their plans against the possibility

of enemy use of nuclear weapons and to avoid presenting

lucrative targets.[110] In both the offense and the defense,

the 1982 edition advised the commander to mass at the last

possible moment and to disperse as soon as possible.

Commanders were told to develop contingency plans so they

could continue the mission despite nuclear fires. Nuclear

weapons were considered superior weapons for the deep

battle. The 1982 edition explained:

Nuclear weapons are particularly effective in
engaging follow-on formations of forces in depth
because of their inherent power and because of
reduced concerns about troop safety and collateral
damage.[111]

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[108]FM 100-5, 1982, 1-3.

[109]FM 100-5, 1982, 7-7.

[110]FM 100-5, 1982, 7-8.

[111]FM 100-5, 1982, 7-15.

Conventional weapons might only delay, disrupt, or divert:
nuclear weapons could achieve destruction of deep targets.
These considerations were not hidden in a separate chapter,
they were an integral part of the keynote chapters of the
1982 edition. The AirLand Battle doctrine posited a truly
integrated conventional-nuclear battlefield.

Technological Optimism

After arguing strongly that the military resists
change, Robert W. Komer admitted that "There is one major
exception, high technology, where the military has
systematically organized itself to keep up with the state of
the art."[112] The military has often chased the latest
development in technology, but that should not be confused
with innovation. GEN David C. Jones, former Chairman of the
Joint Chiefs of Staff, characterized the armed services as
"large, rigid bureaucracies . . . which embrace the past and
adapt new technology to fit traditional missions and
methods."[113] For example, the Army, in the interwar period,
used tanks initially as infantry support weapons, unaware of

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[112]Robert W. Komer, "Strategy and Military Reform," in
Defense Reform Debate, ed. Asa A. Clark IV and others
(Baltimore, MD: The Johns Hopkins University Press, 1984),
14 (in footnote 1).

[113]David C. Jones, "What's Wrong with the Defense
Establishment?" in Defense Reform Debate, ed. Asa A. Clark
IV and others (Baltimore, MD: The Johns Hopkins University
Press, 1984), 273.

their potential when massed and free to maneuver.[114]
Traditionally, the Army's doctrine lags behind the
technological breakthrough.

The 1982 edition breaks with this pattern. TRADOC
designed this doctrine to guide the Army's future materiel
development and to ease the integration of the new systems
into the force structure.[115] The Marine Corps in the
interwar period provided a pale precedent. In the thirties,
the Marine Corps wrote its amphibious doctrine first and
then developed the landing craft and beaching ships the
doctrine required.[116] To outfit itself, the Marine Corps
militarized civilian technologies. AirLand Battle doctrine
was much more ambitious. It called for advances that
surpassed existing civilian technology.

Since the early eighties, TRADOC has driven
research, development, and acquisition with a series of
operational concepts. These operational concepts are
necessarily far-sighted. The research, development, and
acquisition cycle is so slow, that unless a far-sighted

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[114]Jonathan M. House, "Toward Combined Arms Warfare: A
Survey of 20th-Century Tactics, Doctrine, and Organization,"
CSI Research Survey 2 (August 1984): 76.

[115]Huba Wass de Czege and L. D. Holder, "The New FM 100-
5," Military Review LXII.7 (July 1982): 57.

[116]See Russell F. Weigley, The American Way of War: A
History of the United States Military Strategy and Policy
(Bloomington, IN: Indiana University Press, 1973), 254-264.

concept initiates the cycle, the system eventually produced will be obsolete.

In 1982, doctrine began absorbing the prevalent operational concepts. Doctrine became, as a result, not just how the Army currently intends to fight, but how it intends to fight in the future. This was apparent in the deep battle in the 1982 edition of FM 100-5.

The 1976 edition recognized the value of interdicting the second echelon forces. It also recognized the limits of its current inventory of equipment. As a result, it relegated the attack of the follow-on echelons to the Air Force. The 1982 edition told Army commanders to interdict the enemy's second echelon while fighting his first. The manual admitted that "Long-range weapons will be relatively scarce," and "the choice of targets is apt to be large."[117] It conceded that in the near-term, the Army would rely heavily on the Air Force in the deep battle. However, by staking claim to the deep battle, the 1982 edition justified the Army's acquisition of systems that would allow the corps commander to see and attack deep. In 1982 doctrine got out in front of technology and that was truly exceptional.

GEN Starry, TRADOC Commander at the time, affirmed that "Even using conservative planning factors, interdiction

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[117]FM 100-5, 1982, 7-14.

of critical enemy second echelon elements is possible within existing means."[118] While current capabilities allowed interdiction of the second echelon, it was never clearly stated that interdiction was sufficient. GEN Starry did, however, clearly state that partial destruction of elements of the second echelon would "restore freedom to maneuver" and that was the ultimate goal of the deep battle.[119] The new maneuver doctrine counted on the deep battle doing more than interdicting the enemy.

The battlefield commander had few attractive options, in 1982, that would **destroy** approaching enemy formations before they reached the close battle. A daring commander could attack deep with maneuver forces. The 1982 edition admitted, however, that a deep attack by maneuver forces was "more complex and more difficult" than a deep attack by fires alone.[120] L. D. Holder, one of the principal authors of the 1982 edition, conceded that deep attack by maneuver forces was a "high-risk undertaking."[121] Only an early decision to use nuclear or chemical weapons

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[118]General Donn A. Starry, "Extending the Battlefield," Military Review LXI.3 (March 1981): 46.

[119]See Starry, Figures 6-9, pages 40-43. Note that every figure lists destruction of the enemy force as an objective.

[120]FM 100-5, 1982, 7-17.

[121]L. D. Holder, "Maneuver in the Deep Battle," Military Review LXII.5 (May 1982): 60.

would enable the battlefield commander to destroy mobile,
armored enemy formations at long range by fires alone.[122]
If political release was granted, a possibility fraught with
uncertainty, the corps commander depended upon the Air Force
to locate the target.

To **independently** fight a deep battle that **destroyed**
enemy forces required considerable modernization. The Army
needed real-time intelligence (improved, all-weather sensors
and automation that fuses the data) and long-range, lethal,
conventional missiles capable of producing near-nuclear
effects. Only terminally-guided submunitions could achieve
sufficient lethality.

Corps 86 programmed the acquisition of many of the
needed systems by 1986.[123] Articles publicizing the release
of the 1982 edition included a diagram that listed the
programmed Corps 86 technologies, revealing the direct
linkage between AirLand Battle doctrine and Corps 86.[124]
None of the required technologies were available before the
1982 edition of FM 100-5 was revised.

Key surveillance systems -- JSTARS and RPV -- were
field tested in Desert Storm in 1991 and will not complete
fielding before the mid-nineties. ASAS, providing automated

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[122]See Starry, Figures 6-9, pages 40-43.

[123]For a complete listing see TRADOC Pam 525-5, 4.

[124]See, for example, Wass de Czege and Holder, 59.

fusion of intelligence, will not be available before 1995.
A tactical satellite (TACSAT) is still in concept
development. Phase 3 ATACMS is still under development.
The MLRS terminally-guided munition is scheduled to begin
production in 1993.[125] All these systems were foreseen for
fielding by 1986. In fact, none of them have completed
fielding yet.

The full realization of AirLand Battle doctrine
depended on technologies that were still being researched.
The Army underestimated the time it took to develop and
field the new technologies and, therefore, opened a multi-
year gap between current capabilities and doctrine.

Furthermore, the 1982 edition introduced an unstated
assumption that the Soviets would not be able to keep up
with American modernization. If the Soviets also developed
long-range conventional munitions with near-nuclear
lethality and sensors able to detect moving ground units at
long range, they could exact a high toll for any offensive
maneuver we undertook. The 1982 edition argued that highly
lethal deep fires could defeat Soviet maneuvers. These
highly lethal fires can only restore our freedom to maneuver
if the enemy cannot respond in kind.

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[125] "Two Companies to Produce Winning SADARM Design,"
Army Times (15 April 1991): 27.

76

The assumption that we could maintain a durable technological edge over the Soviets was optimistic. Both the 1976 and the 1982 edition admitted that the Soviet forces were nearly equal to U.S. forces in quality. The American advance in the laboratories was repeatedly offset by the Soviet ability to more rapidly field new equipment in the seventies and eighties. In 1982, Army doctrine conceded the technological lead of U.S. forces was declining while incongruously assuming that U.S. forces could retain a technological advantage.

In sum, the 1982 edition exhibited a markedly more optimistic view of technology. It assumed that doctrine could guide the future direction of technology. It assumed that technologies demonstrated in the laboratory could be rapidly fielded according to a predictable schedule. Finally, it assumed that, once fielded, these technologies would accrue a unilateral and decisive advantage for U.S. forces.

Summary

In summary, the 1982 edition of FM 100-5 differed dramatically from the 1976 edition. The differences were so fundamental that many saw the two doctrines as opposites. The 1986 edition proved a much less significant doctrinal change.

1986 Edition of FM 100-5

General William R. Richardson, the TRADOC Commander in 1986, believed "the 1982 edition of FM 100-5 was on target."[126] He considered the 1986 edition a refinement of the fundamentally correct edition that preceded it. The 1986 edition carried forward the basic concepts of the 1982 edition. Maneuver theory inspired the 1986 edition as it had the 1982 edition. The emphasis on the offense, momentum, seizing the initiative, and the human dimension of war persisted. The preference for historical illustration continued, and the historical examples in the manual multiplied.

The 1986 edition, however, did moderate the assertions of the 1982 edition in some areas. The 1986 edition is a more temperate and balanced manual. This moderation is evident in the treatment of attrition theory, the deep battle, joint and combined operations, and nuclear weapons.

Other areas were accentuated in the 1986 edition. The operational level of war and sustainment enjoyed increased emphasis in the 1986 edition. The 1986 edition was even more optimistic about technology than the 1982 edition.

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[126]Richardson, 7.

The 1986 edition contained few true innovations. It emphasized battlefield stress for the first time.[127] More significantly, it underlined the value of light forces as no other edition had. Otherwise, there was little originality in the 1986 edition.

The differences between the 1982 and 1986 editions of FM 100-5 were much less significant than the radically revolutionary changes that separated the two preceding editions. The novel aspects of the 1986 edition, nonetheless, represent a directional change in the course of doctrine. Whether moderation or accentuation, each change marks a turn point in the trend.

The two preceding editions were distinctive in format and layout. The 1986 edition can also be distinguished by its appearance from the preceding editions. It retained the camouflage cover that the 1976 and 1982 edition had adopted, but the text of the 1986 edition was laid out much more formally. Wide margins that had been filled with key points in bold lettering and colored boxes in the 1982 edition were squeezed out by twin columns of text in the 1986 edition. The number of figures was pared down considerably. The 1986 edition had a far more conservative appearance.

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[127]FM 100-5, 1986, 88.

There is other evidence that the 1986 edition took itself more seriously. The 1982 and 1986 editions both identified three "essential components" to "superior performance in combat."[128] Both stressed that "good people" contributed the most. The 1982 edition believed good weapons came next and doctrine, third. The 1986 edition reversed this sequence and asserted that "a sound, well-understood doctrine for fighting" counted more than weapons.

The 1986 edition was also wordier than the previous edition. For example the 1986 edition took twice as many words to explain the same four basic tenets of AirLand Battle.[129] Many of the lists grew longer in the 1986 edition. The seven "imperatives" became ten.[130] The fourteen major functional areas grew to seventeen.[131] In polishing and refining the 1982 edition, the latest edition of FM 100-5 became longer and more elaborate.

Concessions to Attrition Theory

The dominance of maneuver theory was unmistakable in the 1986 edition. There were, however, some concessions to the attrition theorists.

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[128]FM 100-5, 1982, 1-5 and FM 100-5, 1986, 5.

[129]FM 100-5, 1982, 2-2 to 2-3 and FM 100-5, 1986, 14-17

[130]FM 100-5, 1986, 23.

[131]FM 100-5, 1986, 40.

The 1976 edition focused on firepower. The 1982 edition subordinated firepower to maneuver. The 1986 edition restored the balance between the two. Firepower and maneuver each provided a unique and independent contribution to combat power in the 1986 edition. The 1986 edition stressed that maneuver would "rarely be possible without firepower and protection."[132] It also argued that firepower could be "used independently of maneuver to destroy, delay, or disrupt uncommitted enemy forces."[133] The 1982 edition made neither concession.

In the 1976 edition, the primary attributes of leadership were tactical and technical proficiency. In the 1982 edition, leaders were needed primarily to inspire and motivate soldiers. In the 1986 edition, leaders were valued for their "skill and personality,"[134] their competence and their confidence. The 1986 edition treated leadership in a more balanced manner than either the 1976 or 1982 edition had.

The 1976 edition focused on weapon systems The 1982 edition focused on men. The 1986 edition adopted the 1982 edition's emphasis on human factors in war, but tempered it by injecting allusions to the importance of having quality

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132FM 100-5, 1986, 12.

133FM 100-5, 1986, 12.

134FM 100-5, 1986, 14. Emphasis added.

weapons. For example, the 1982 edition closes the sub-chapter entitled "Dynamics of Battle" with the following sentence:

> In the final analysis and once the force is engaged, superior combat power derives from the courage of soldiers, the excellence of their training, and the quality of their leadership.[135]

The authors of the 1986 edition liked this phrase but added three factors:

> In the final analysis and once the force is engaged, superior combat power derives from the courage **and competence** of soldiers, the excellence of their training, **the capability of their equipment, the soundness of their combined arms doctrine**, and above all the quality of their leadership.[136]

The 1986 edition conceded that technical proficiency and weapons capability mattered.

The 1976 edition told commanders a force ratio of 6 to 1 was needed to win in the offense. The 1982 edition instead emphasized that attackers who "lacked significant numerical advantage," could succeed "by massing unexpectedly" to achieve "a brief local superiority."[137] The 1986 edition took a position between the two. It argued the attacker needed "**overwhelming** local superiority."[138] The 1986 edition added a paragraph that underlined the

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[135]FM 100-5, 1982, 2-6.

[136]FM 100-5, 1986, 14. Emphasis added.

[137]FM 100-5, 1982, 8-5.

[138]FM 100-5, 1986, 96. Emphasis added.

vulnerability of an attacking force, the requirement for "local superiority in combat power at the point of the attack," and "the need to have sufficient force available to exploit success."[139] The 1986 edition left the reader wondering whether a force that is numerically inferior overall could attack successfully.

The 1986 edition sided with the 1982 edition by stating, "The offensive is the decisive form of war -- the commander's ultimate means of imposing his will upon the enemy."[140] The 1986 edition retained the image of the offense as an "expanding torrent" and affirmed the multiplier effect of momentum. It also introduced, however, friction and the culminating point, two of Clausewitz's theoretical constructs that characterize the natural forces that slow and limit offensive operations.[141]

Resuscitating language from the 1968 and earlier editions, the 1986 edition argued that since the defense "cannot normally assure victory," it should be considered nothing more than a "temporary expedient."[142] The 1986 edition, however, also admitted that numerical inferiority

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[139]FM 100-5, 1986, 94.

[140]FM 100-5, 1986, 91.

[141]FM 100-5, 1986, 16, 110, and 181-182.

[142]FM 100-5, 1986, 129.

may oblige a force to take a defensive stance.[143]   It cited
the Clausewitzian dictum that the defense is the strongest
form of war.[144]   It then enumerated the many advantages of
the defense, compiling a list remarkably similar to that
which appeared in the 1976 edition.   Whereas the 1982
edition argued a defense could merely "deny success to an
attacking enemy,"[145] the 1986 edition, in stronger language,
contended that defensive operations could "defeat" an enemy
attack.[146]

The 1986 edition retained the 1982 edition's
defensive continuum that ranged defensive techniques from
static to dynamic.   It also, curiously, restored the mobile
and area defense that had last appeared in the 1968
edition.[147]   By recognizing a terrain-oriented defense, the
1986 edition took a step toward the 1976 doctrine of Active
Defense.

The 1986 edition also attempted to distance itself
from the term "nonlinear."   The authors clearly preferred
"fluid" and used it where the authors of the 1982 edition

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[143]FM 100-5, 1986, 139.

[144]FM 100-5, 1986, 129.

[145]FM 100-5, 1982, 10-1.

[146]FM 100-5, 1986, 131.

[147]FM 100-5, 1986, 133-135.

would have used "nonlinear."[148]   The 1986 edition was more

punctilious about theory.   In an appendix, the authors

explained "Key concepts of Operational Design."   The concept

of lines of operation[149] would not have meshed well with a

general description of the battlefield as "nonlinear."   The

adjective "fluid" allowed them to evade this theoretical

conundrum.

More importantly, the 1986 edition did not assume

that all warfare would be fluid.   The 1982 edition

envisioned only "nonlinear maneuver battles."[150]   The 1986

edition envisioned both fluid and static battlefields.[151]

Whereas the 1982 edition argued linear warfare would be a

temporary condition, the 1986 edition retorted that "linear

stalemate is still possible."[152]

The 1986 edition clearly took a step back from the

unbridled maneuverism of the 1982 edition.   It showed

similar moderation in its treatment of the deep battle.

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[148]The term "nonlinear" is used only once, FM 100-5,
1986, 2.   "Fluid" is used repeatedly, FM 100-5, 1986, 3, 32,
91, 98, and 110 for example.

[149]FM 100-5, 1986, 180-181.

[150]FM 100-5, 1982, 1-1.

[151]FM 100-5, 1986, 32.

[152]FM 100-5, 1986, 111.

Deep Operations

The 1986 edition shared the 1982 edition's commitment to deep operations. It agreed that "well-timed deep operations against enemy forces not yet in contact are necessary for success."[153] The 1986 edition, however, limited the deep battle in a number of ways. Divisional brigades and smaller units were told in the 1986 edition that they do not normally conduct independent deep operations.[154] The terms "deep attack" and "deep battle" were consistently replaced by "deep operations." This formulation was not only less aggressive, it inferred that attacking enemy forces not yet in contact was really the responsibility of the operational commander, not the tactical commander. Furthermore, the 1986 edition stressed that deep operations were "an integral part of the overall plan,"[155] designed to "influence the conditions in which future close operations will be conducted."[156] Thus, the 1986 edition made clear that deep operations were conducted in support of the close battle and not in pursuit of some independent goal.

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[153]FM 100-5, 1986, 37.

[154]FM 100-5, 1986, 106.

[155]FM 100-5, 1986, 37.

[156]FM 100-5, 1986, 19.

The authors also reduced the profile of deep operations in the 1986 edition. The sections dedicated to deep operations were among the few that were pruned in the new edition of FM 100-5.[157] Agility overtook depth as the second tenet of AirLand Battle in the 1986 edition.

My personal experience leads me to question whether the moderation expressed in official doctrine regarding deep operations and maneuverism was fully accepted by the field army. In recent instruction at the Command and General Staff College, instructors routinely required brigade plans to address deep operations. Offensive planning exercises rarely provided the attacker with sufficient forces to have "overwhelming superiority" at the point of attack and a potent exploitation force. Numerical analysis and attrition theory were rarely persuasive with my peers or the faculty. If my personal experience is valid, the field army and the schoolhouse have not kept up with official doctrine in these two areas.

Jointness

The 1986 edition more carefully delineated Army and Air Force roles. The 1982 edition had grouped Close Air Support (CAS) and Battlefield Air Interdiction (BAI) with mortars, artillery, rockets and missiles under one heading -

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[157]FM 100-5, 1986, 37.

- Fire Support.[158] The 1986 edition distinguished between

the Air Force contribution and the organic Army fire support

by discussing each separately.[159] The 1982 edition defined

BAI as "air action against hostile surface targets nominated

by the ground commander and in direct support of ground

operations."[160] The 1986 edition specified that "BAI is

executed by the air component commander as an integral part

of a total air interdiction effort."[161] The 1982 edition

told commanders to always conduct a deep battle. It

admitted that only air interdiction could reach the far

limit of the corps commander's area of influence. This

inferred that commanders could plan on having BAI sorties.

The 1986 edition underlined that counterair operations would

have priority until air supremacy was secured. The

consequence was that corps commanders may or may not receive

the air assets to conduct deep operations. The 1982 edition

presumed too much about Air Force support for ground

operations. The 1986 edition reconciled AirLand Battle

doctrine with joint doctrine and Army/Air Force agreements.

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[158]FM 100-5, 1982, 7-10 to 7-13.

[159]FM 100-5, 1986, 43-50.

[160]FM 100-5, 1982, 7-11.

[161]FM 100-5, 1986, 49.

Denuclearization

The 1986 edition de-emphasized the use of nuclear weapons by U.S. forces in two ways. First, it talked about them less. Most of the references to the offensive use of nuclear weapons were removed. The 1982 edition, for example had noted the virtues of nuclear weapons in supporting the deep battle and contingency operations. Both were absent from the 1986 edition. Every reference to the use of nuclear weapons that survived was prefaced by the phrase "upon approval by National Command Authority."[162]

Second, the 1986 edition played down the tactical utility of weapons. The 1982 edition envisioned the use of nuclear weapons to achieve tactical goals.[163] The 1986 edition stated clearly that "Even after authority is granted for employment of nuclear weapons, employment will be guided by strategic purposes more than by tactical effect."[164] Commanders were warned that nuclear release was fraught with uncertainty. The 1986 edition, therefore, recommended: "Plans at all echelons will be developed to permit **but not depend upon** nuclear weapons employment."[165]

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[162]FM 100-5, 1986, 110, for example.

[163]FM 100-5, 1982, 7-12.

[164]FM 100-5, 1986, 45.

[165]FM 100-5, 1986, 45. Emphasis from the original.

Allied Concerns

The 1986 edition responded to concerns raised by U.S. allies. It clarified the scope and intent of deep operations and the employment nuclear weapons. It defined a defensive pattern, the area defense, that was more easily squared with the NATO forward defense.

The 1986 edition went to great lengths to explain that AirLand Battle doctrine was a global doctrine that American forces would modify as necessary to match political and strategic constraints peculiar to the theater in which they operate. The 1986 edition added the following clarifying passages:

> National policies and strategies; alliance and
> bilateral international agreements; U.S. joint
> military policies and doctrine provide the framework
> for application of AirLand Battle doctrine in NATO
> Europe, Northeast Asia, Southwest Asia, and other
> theaters to be established in case of war. . . .
> National strategy and theater strategy will dictate
> the ends and means of major operations and the
> purposes and conditions of tactical battles and
> engagements.[166]

The 1986 edition admitted plainly that allied tactical publications and standardization agreements trumped doctrine in theater. In case this was not clear, the 1986 edition gave examples:

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[166] FM 100-5, 1986, 161.

Strategic guidance will constrain operational
methods by ruling out some otherwise attractive
alternatives. Withholding of nuclear weapons,
prohibiting the unopposed surrender of territory or
cities, exempting the territory of certain nations
from operations, and limiting the use of aerial
bombing are examples of the curbs that strategy may
impose on operations.[167]

This list checked off all the allied concerns.

Operational Level of War

The 1982 edition introduced the operational level of war; the 1986 edition gave it substance. The operational level of war was more thoroughly defined in the 1986 edition. An appendix explained the "Key Concepts of Operational Design."

The full integration of the theoretical distinction between the tactical and operational levels of war distinguished the 1986 edition from the 1982 edition. A chapter on planning and execution treated the operational and tactical levels separately. The chapters on the conduct of the offense and defense addressed operations and major campaigns first, then tactical actions. Even the chapter on sustainment dedicated a section to operational sustainment, distinct from its treatment of tactical sustainment. The 1982 edition demarcated an operational level of analysis; the 1986 edition conducted the analysis.

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[167] FM 100-5, 1986, 29.

At the operational level, war is a contest of wills. Victory equates to imposing one's will on the opponent or achieving moral dominance. The 1986 edition incorporated these measures of success. For example, the 1986 edition added "moral dominance" to the list of benefits accrued by successful maneuver.[168] The chapter on offensive operations in the 1982 edition began, "The offensive is the decisive form of war, the commander's only means of attaining a positive goal or of completely destroying an enemy force."[169] The authors of the 1986 edition changed the sentence to read, "The offensive is the decisive form of war -- the commander's ultimate means of imposing his will upon the enemy."[170]

Analysis at the operational level views war as a dynamic clash between "the directing minds" of the two antagonists and their "conceptual methods of action." The technical aspects of war are relegated to the tactical level. At the operational level, numbers matters least and maneuver holds the greatest promise; the commander enjoys more degrees of freedom. At the tactical level, the "physics of war -- weapons, lethality, time, distance,

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[168]FM 100-5, 1986, 12.

[169]FM 100-5 1982, 8-1

[170]FM 100-5, 1986, 91.

92

space, speed and material quality"[171] -- weigh heavily on
the commander, reducing his degrees of freedom. The 1986
edition divided war into operational and tactical levels.
It also divided war into art and science.[172]

The coincident dualism in the manual and in the
writing of the TRADOC Commander at the time indicated a more
agnostic embrace of maneuver theory. The 1982 edition
heralded the dominance of maneuver theory and applied it to
warfare without levels. The 1986 edition delimited levels
of war; maneuver theory dominated at the operational level
but competed with attrition theory at the tactical level.

How to Think about Sustainment

The chapter dedicated to Combat Service Support
(CSS) in the 1982 edition of FM 100-5 was incongruous.[173]
Though the 1982 edition presented a radically different view
of warfare, the logistics concept was carried forward from
the 1976 edition with little change. In fact, there was no
evidence of the new operational concept (AirLand Battle) in
the chapter at all. Elsewhere in the 1982 edition, the
authors avoided telling commanders specifically how to do
their jobs. The CSS chapter broke with this pattern. It

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[171] Richardson, 6.

[172] FM 100-5, 1986, 14.

[173] FM 100-5, 1982, 5-1 to 5-11.

93

was purely descriptive. The chapter strung together a series of diagrams portraying the flow of supplies, the positioning of medical aid stations, the distribution of ammunition supply points, and the relationships between corps general support units and divisional direct support units. The 1982 edition got into the minutiae of logistics; it avoided this in all other areas.

The chapter on "Sustainment Planning and Execution" in the 1986 edition was as different as its title. The 1986 edition replaced the descriptive approach with a conceptual one. It provided principles that should guide commanders as they think about logistics. More significantly, the 1986 edition charged logisticians with anticipating the requirements of the maneuver commander, integrating sustainment with the scheme of maneuver, surging to respond to sudden demands as maneuver commanders seize fleeting opportunities, and improvising when plans are derailed.[174] The concept of logistics in the 1986 edition matched the image of fluid combat the edition envisioned.

Consistent with its emphasis on the operational level of war, the 1986 edition stressed sustainment more that any previous edition had. Sustainment was elevated to the same plane as the offense or the defense. The concept was illustrated by a full historical case study (Patton's

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[174]FM 100-5, 1986, 62-63.

counterattack from Lorraine north into Belgium).

Sustainment had its own operational theory (lines of

operations). The concluding paragraph of the chapter is the

most telling:

> Sustainment is a central, potentially decisive
> aspect of operations, not an adjunct to them. It is
> as important to success as any other part of the
> commander's operational plan. To meet the
> sustainment challenge, commanders must grasp both
> the operational and logistical possibilities and
> limitations of their situations. The most
> successful commanders have been those who pressed
> their operations to the very limit of their
> sustaining power -- but not one step further.[175]

The CSS chapter in the 1982 edition had no concluding

remarks. The final paragraph defined modal operations,

terminal operations, and movement management.[176]

Technological Optimism

The 1986 edition was even more optimistic about

technology than the 1982 edition. Though it admitted air

assets would often be diverted to counter air operations and

that BAI was a part of the interdiction campaign directed by

the air component commander, and though no other capability

had been acquired, the 1986 edition nonetheless expected

deep operations to yield great dividends.

By 1986, there was ample evidence that the Army had

exaggerated its ability to direct and schedule the

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[175]FM 100-5, 1986, 74.

[176]FM 100-5, 1982, 5-11.

95

development of technology. Nonetheless, the 1986 edition explicitly provided for the Remotely Piloted Vehicle (RPV) in its Army Airspace Command and Control (A^{2}C^2) System.[177] The RPV was designed to span an important gap in corps and division intelligence capabilities. The RPV is, however, still in development. The persistence of this technological optimism in the face of repeatedly missed milestones and slipped development schedules was remarkable.

Lightness

The 1986 edition emphasized light forces more than previous editions. It presaged a doctrinal emphasis on operations employing light and heavy forces together.

The 1986 edition identified three types of conflicts according to their intensity: high-, mid-, and low-intensity conflicts (LIC). High- and mid-intensity conflicts were grouped together; LIC was emphasized and discussed separately. The 1986 edition stressed the "growing incidence of war at the low end of the spectrum" and the unique nature of LIC battlefields. The 1986 edition emphasized that LIC required rapidly deployable (read light) forces. The 1986 edition also considered light forces, the "preferred Army force" for contingency operations.[178] The

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[177]FM 100-5, 1986, 52-53.

[178]FM 100-5, 1986, 170.

1982 edition had used more balanced language in the corresponding paragraph.[179] Both editions addressed four "Special Environments" and the suitability of different types of forces for each environment.[180] There was an interesting change in the 1986 edition. Whereas the 1982 edition had recommended both heavy and light forces in the mountainous regions, the 1986 edition preferred light forces. The 1982 edition argued that "Armor and mechanized infantry forces are most suitable to desert combat; . . ."[181] The 1986 edition retorted that "Forces of all types can be employed in the desert."[182] It highlighted the potential contribution of light infantry, motorized, air assault, and airborne forces.

The newfound emphasis on light forces presaged a TRADOC blitz in the late eighties on the employment of light and heavy forces together. The field manual on corps operations added a section on "Heavy-Light Considerations" to the chapters on offense and defense.[183] The field manual

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[179]FM 100-5, 1982, 16-1.

[180]FM 100-5, 1982, 3-10 to 3-13 and FM 100-5, 1986, 82-85.

[181]FM 100-5, 1982, 3-11.

[182]FM 100-5, 1986, 83.

[183]U.S. Army, FM 100-15, Corps Operations (Washington, D.C.: Department of the Army, 13 September 1989), 5-18 to 5-19 and 6-14 to 6-15.

on division operations added an appendix on "Heavy-Light Operations."[184] Heavy-light operations became a routine part of tactics instruction at the Command and General Staff College. Task forces composed of heavy and light units began exercising at the National Training Center. The draft manual on heavy-light operations was completed in early 1991. This emphasis on light forces and their employment with heavy forces was the only significant doctrinal innovation of the most recent period that began with the 1986 edition.

In summary, the 1986 edition of FM 100-5 carried forward the main attributes of the 1982 edition. The fact that the soldiers in the field never coined a unique name for the 1986 edition, calling it the AirLand Battle doctrine as they had the 1982 edition, is very telling.

The 1986 edition did, however, temper, at least officially, the maneuverism of the 1982 edition. It internalized the distinction between operational and tactical levels of war. Furthermore, in the 1986 edition, sustainment doctrine caught up with maneuver doctrine and light forces received unprecedented attention.

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[184]U.S. Army, FM 71-100, Division Operations (Washington, D C.: Department of the Army, 16 June 1990), Appendix A.

AirLand Battle Future

A group of studies collectively known as AirLand
Battle Future have produced a new operational concept that
will reshape U.S. Army doctrine, organization and equipment
in the nineties. A new edition of FM 100-5, currently being
drafted, will encapsulate the new doctrinal themes.

Four primary themes have taken root that will
distinguish the future FM 100-5 from the 1986 edition.[185]
The future edition will focus on the nonlinear battlefield
as no previous edition had. It will stress deployability
more. It will require revolutionary changes in logistics.
Finally, it will rely on future technologies more than any
preceding doctrine.

Nonlinearity

The 1982 edition was the first to focus on a
nonlinear battlefield. The 1986 edition shied away from the
term "nonlinear." It argued future battlefields would be
both fluid and static or linear. The future edition of FM
100-5 will disregard the moderation evident in the 1986

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[185]The prominence of these themes and their likely place
in doctrine is derived from: interviews with Lieutenant
Colonel Thomas Mitchell, the current author of the next
edition of FM 100-5; lectures by General John W. Foss,
Commander TRADOC, Brigadier General John E. Miller, Deputy
Commandant, Command and General Staff College, and Colonel
Stephen J. Kempf, Director, Concept Development Directorate;
and recent articles, cited earlier, by General Foss and
Major General Stephen Silvasy, Jr., the Deputy Chief of
Staff for Concepts, Doctrine, and Developments, TRADOC.

edition. The nonlinear battlefield will be its central organizing theme.

The 1982 edition predicted the next battlefield would be rendered nonlinear by the penetrating tactics and incredible firepower of our most threatening adversary. The forthcoming edition will argue that the combined pressure of rising costs, declining budgets, and mutually agreed arms reductions will reduce the density of weapon systems on the battlefield.[186] GEN Foss further explained:

> This more open, less structured battlefield means that at the operational level -- in mid to high-intensity conflict -- commanders must be prepared to fight a nonlinear battle. At the tactical level, however, battles can be both linear and nonlinear. In low-intensity conflict, nonlinearity will be the normal condition.[187]

With the exception of some tactical engagements, all operations would be nonlinear.

The reader should not mistake the admission that tactical battles could be nonlinear as an indicator of moderation comparable to the 1986 edition. GEN Foss cites studies that show the dominance of operations over tactics in the future. He warns that units "tied down in a tactical attrition battle" lose their operational value.[188] MG Silvasy, discussing the tactical level, tells units to

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[186]Foss, 20-21.

[187]Foss, 22.

[188]Foss, 24.

100

"avoid 'head-to-head,' attrition warfare."[189] There is little incentive to focus on linear warfare in the next edition.

GEN Foss admits that, "organizations must be capable of conducting both linear and nonlinear operations."[190] He also argues, however, that, "Organizations designed to fight on the nonlinear battlefield can make the transition to linear warfare when required; the reverse is not always as easy."[191] The next edition of FM 100-5 will focus on nonlinear warfare because the doctrine writers believe that it presents the greatest challenge and that units that can meet the challenge of nonlinear warfare will be able to master linear warfare easily.

The 1986 edition relied on a five-part battlefield framework (deep, close, rear, reserve, security). The next edition will divide the battlefield into three areas: the dispersal area, the battle zone, and the detection zone. Prior to commitment, units will remain scattered and mobile in a dispersal area. The corps will detect the enemy forces using electronic means and cavalry units in a zone as deep as 400 kilometers. The new operational concept assumes the application of recent technological advances will make the

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[189]Silvasy, 3.

[190]Foss, 22.

[191]Foss, 22. See also Silvasy, 12.

battlefield nearly transparent in real-time to the maneuver
commander.[192] The corps will then shape the battlefield by
fires, using centralized aviation, MLRS, ATACMS, and air
assets to weaken, isolate, and canalize the enemy in the
battle zone. Maneuver units, supported by massed tactical
air, corps artillery, and attack helicopters, will then
close with and decisively defeat the enemy force in the
battle zone. Units will then disperse rapidly and
reconstitute.[193]

This operational concept embraces maneuverism more
heartily than even the 1982 edition did. The 1982 edition
recommended the attacker retain half his force in reserve.
The next edition fights the entire force as reserves.[194] In
the 1982 edition, the defense entailed both static forces
that blocked and dynamic forces that counterattacked. In
the new edition, maneuver forces will only attack. The
distinction between the offense and the defense will
virtually disappear in the next edition. MG Silvasy
envisions the offense as an exploitation of a gap; the

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[192]Foss, 22.

[193]These areas and stages are described in Silvasy, 4-9
and Foss, 24.

[194]Silvasy, 4.

defense as a spoiling attack.[195] Both are offensive

maneuvers.

The next edition will show all the symptoms of

unbridled maneuverism. It will stress the need "to gain and

maintain the initiative."[196] It will argue maneuver is "the

decisive ingredient for decisive operations."[197] Operations

will orient on defeating enemy forces, not seizing or

retaining terrain.[198] It will emphasize risk acceptance,

mission-type orders, decentralized execution.[199] The tenets

of AirLand Battle doctrine will be retained.[200]

The organizational changes that the proponents of

AirLand Battle Future project are the most telling.

Maneuver doctrines require manageable three unit formations.

Soviet units are triangular. Attrition doctrines demand

potent five unit formations. In the fifties, when the U.S.

Army was most firepower oriented, it opted for pentomic

formations. Under AirLand Battle Future, the brigades will

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[195]Silvasy, 7.

[196]Silvasy, 3.

[197]Silvasy, 7.

[198]Silvasy, 3.

[199]Silvasy, 12 and Foss, 37.

[200]Foss, 24.

be pared from four battalions to three. Battalions will be pared from four companies to three as well.[201]

Maneuver doctrines require more reconnaissance assets than attrition doctrines. The Soviet military invests twice as much combat power in reconnaissance as the U.S. Army. Under AirLand Battle Future, the corps may get a second armored cavalry regiment, the divisional cavalry squadron may get its tanks back, and the brigade is slated to get a scout platoon.[202]

Of course, maneuver doctrines task engineer units with assuring mobility; attrition doctrines, countermobility. For example, countermobility enjoyed a higher priority under the Active Defense than under AirLand Battle. Under AirLand Battle Future, the engineer battalion will be focused even more narrowly on mobility.[203]

Lastly, under AirLand Battle Future, brigades will be cohesive combined arms teams. Habitual combat support and combat service support relationships will be strengthened.[204] By standardizing the brigade, the proponents of AirLand Battle Future hope to increase its

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[201]Foss, 34.

[202]Foss, 35-36.

[203]Foss, 35.

[204]Silvasy, 8 and 11.

responsiveness. An attrition doctrine would prefer to fine tune the force ratios by task organizing the brigade.

The current force structure was designed to meet the requirements laid down in the 1982 and 1986 editions of FM 100-5. These organizational changes will infuse a capacity for maneuver beyond the operational requirements of these editions. The next edition will be more single-mindedly maneuverist than any of the previous editions.

Deployability

The 1982 edition tried to shift the Army's focus away from Central Europe. The 1986 edition drew attention to low-intensity conflicts and promoted light forces more than previous editions. The next edition will accentuate this trend by even more greatly emphasizing low-intensity conflict, contingency and heavy-light operations, and deployability.[205]

GEN Foss explains the greater emphasis on deployability:

> Most important, the primary mission of the U.S. Army
> has shifted to the projection of land combat power
> from the continental United States and from our
> forward-deployed forces when possible. . . . Our
> new primary mission . . . will place a premium on
> the deployability of our Army.[206]

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[205]LTC Thomas Mitchell, Fellow, School of Advanced Military Studies, interviewed by the author 8 March 1991.

[206]Foss, 20-21.

The new emphasis is reflected in the flow of research and development funds. The Army will invest heavily in a light helicopter (LH), an armored gun system (AGS), and a more deployable Multiple-Launch Rocket System (MLRS) to increase the lethality of its most rapidly deployable forces.[207]

Logistics

AirLand Battle Future presents a formidable challenge to logisticians. Supported units will operate over greater ranges and remain mobile. Combat will occur far from stocks. Logistic support to committed units will have to cross wide expanses of unsecured ground. Enemy attacks will destroy already scarce logistics resources and prime movers. After fighting the close battle, maneuver units will rapidly displace and disperse. Damaged vehicles will need to be immediately recovered, since friendly units are not likely to hold the ground on which the battle was fought. Units will remain dispersed while reconstituting and preparing for the next operation.

The new concept overwhelms our current capabilities and logistics doctrine. The current density of recovery vehicles and fuel transporters, already overly tasked, will be inadequate. Currently, logistics assets are optimized by

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[207]Foss, 37.

centralizing sustainment operations. The new concept will require decentralized sustainment.

Organizational and technological remedies are projected. Logistics functions will be concentrated at the corps and brigade level. Corps will throughput support directly to the Forward Support Battalions (FSB) of the brigade. FSBs will provide unit and direct support maintenance and resupply by unit distribution down to the individual weapon system. Divisions and maneuver battalions and companies will be stripped of most logistics responsibilities so they focus on the battle.[208] By consolidating support in the FSB and Corps Support Command (COSCOM) the assets may be more intensively managed, if the command and control system is improved. Emerging technology should make this possible:

> Application of technological advances in automation and communication should provide real time visibility of logistics in motion and the tactical situation. Armed with this information and predictive modeling aids, CSS commanders will better anticipate requirements and position supplies and support accordingly.[209]

The technological remedies aim to provide the logistics commander the critical information he needs to maneuver logistics in support of the maneuver commander's intent.

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[208]Silvasy, 10 and Foss, 36 and "Anticipation is the Key to Future 'Logistics in Motion,'" Army 41.2 (February 1991): 34-35.

[209]"Anticipation," 34.

Futurism

Both the 1982 and 1986 editions evinced a high degree of technological optimism. The next edition will accentuate this trend. The emerging nonlinear concept requires greater lethality at longer ranges, better automation and command, control, communications, and intelligence (C^3I), extended operational range for our maneuver forces. The optimism regarding our ability to guide the course of technology, schedule technological demonstration, and field new equipment is unbridled.

Though technologies scheduled in 1982 for fielding by 1986 are still in development, the new operational concept optimistically presumes a number of high-risk technological advances. Increasing the lethality of deployable forces depends upon successful development of some very high risk technologies: LH with the Longbow radar and the Line-of-sight Anti-tank (LOSAT) weapon or Kinetic Energy Missile (KEM). LOSAT has not been shot at a target, yet. Developers fear it is too early to expect it to hit anything. They content themselves instead with counting the number of electronic messages successfully passed to the hyper-velocity missile while in flight.[210] Both LOSAT and the Longbow radar drew fire from Congressional critics who questioned the Army's commitment to unusually high-risk

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[210] "No Tank-Killer Competition," Army Times (15 April 1991): 26.

development programs. Unchastened, the Army includes
kinetic-energy missile battalions on the wiring diagrams of
prospective division structures.

The new operational concept rests upon the
assumption that the next battlefield will be nearly
transparent to the corps commander. JSTARS, a key source of
intelligence, has been field-tested in Kuwait and will be
fielded in the early nineties. The corps commander will
also need, however, the All-Source Analysis System (ASAS).
It will:

> receive information about the enemy from JSTARS and
> a myriad of other sensors and intelligence
> collection systems, evaluate, fuse, and store the
> information and present it on demand in a format
> usable by commanders.[211]

ASAS will provide the commander the real-time, nearly
perfect intelligence he needs to fight according to the new
operational concept. ASAS is three years behind schedule
and over budget. Current projections begin fielding ASAS in
1995.[212]

ASAS and four other automated systems, only one of
which is fielded, will feed into the Army Tactical Command
and Control System (ATCCS). ATCCS will allow the corps
commander to rapidly synchronize maneuver, intelligence,

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[211]Eric C. Ludvigsen, "Future Combat Systems: A Status
Report," Army 41.2 (February 1991): 38.

[212]Ludvigsen, 38.

fire support, air defense, and CSS. The definitive version
of the CSS and fire support control systems will not be
fielded before 1997.[213]

GEN Foss argues that FM 100-5 must be revised to
take into account these advances in technology. The next
edition of FM 100-5, however, will be published years before
any of these technologies will be fielded. Worse yet, the
Army's procurement account has dropped 65 percent since
1985, accounting for inflation. It will be reduced by 11
percent in 1992 and 5 percent in 1993. The gap between
doctrine and capabilities is yawning. AirLand Battle Future
will become current doctrine long before the future
technologies that allow the adoption of a nonlinear doctrine
have left the laboratory. FM 100-5 is slipping into
futurism.

The futurism reaches beyond technology. The next
edition of FM 100-5 expects future warfare to be nonlinear
in part because arms reductions will greatly reduce the
density of forces stationed in Europe. If the Conventional
Forces in Europe Treaty (CFE) is implemented, it will take
years to actually remove the forces. A precondition for
nonlinear doctrine is a nearly transparent, substantially
less dense battlefield. Neither precondition will be met
when the next edition of FM 100-5 is published.

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[213]Ludvigsen, 38.

Beginning with the 1982 edition, doctrine seemed to assume that the U.S. would enjoy a unilateral technological edge over the Soviets. This is more apparent in AirLand Battle Future than any previous edition. AirLand Battle Future presumes we will alone have the ability to detect and destroy any battalion-sized unit that moves as far away as 400 kilometers. If the Soviets can do that as well, what safety will there be in movement? If technology will make the battlefield nearly transparent to both sides, how can we hope to surprise the Soviets with our maneuvers?

Furthermore, the increasing range and automation in fire support allows the rapid, lateral concentration of fires. It is hard to imagine a maneuver unit that can mass and disperse more rapidly than modern systems like the Soviet SS-21 or multiple rocket launchers can deliver destructive fires. AirLand Battle Future evidently assumes the Soviets will not keep pace with our modernization.

The unstated assumption in AirLand Battle Future is that the United States, and only the United States will exploit the new technologies. We assume the battlefield will be transparent to us, opaque to our adversaries. We assume this will be a decisive advantage for us, but if it is decisive, the Soviets will be highly motivated to acquire the technology themselves or to field a countermeasure.

In the past the Soviets have caught up with any decisive technological breakthrough we achieved. From the original atomic devices to cruise missiles, the strategic arms race provides numerous examples of the Soviet ability to keep up with technology in the areas that matter. To assume they will allow us to retain a decisive technological advantage is optimistic.

Summary

U.S. Army doctrine has frequently changed course since 1968. Four revisions of FM 100-5, three past and one on-going, mark the four distinct turn points. Doctrine has oscillated between attrition and maneuver theory in a pendulum-like manner, reversing its course every four or five years. Figure 2-1 graphically depicts the change in doctrine since 1968. Table 2-1 summarizes the distinctive attributes of each version of FM 100-5.

Only independent variables that change can explain change in a dependent variable. The revolutionary changes in doctrine can only be explained by factors that show a pattern of change that parallels the pattern of change in doctrine. The evolution of an invariable factor may coincide with one swing in doctrine, but, when doctrine reverses its course and swings back in the opposite direction, the posited relationship between doctrine and that factor will be broken.

Evolutionary Changes

Not all change in doctrine since 1968 has been revoluticnary. In a number of areas, U.S. Army doctrine has evolved gradually and continuously in the same direction.

Aviation

Aviation has enjoyed increasing emphasis since the early seventies. The 1976 edition of FM 100-5 affirmed that, "The 'airmobile' concept is the most dramatic organizational advance in the U.S. Army."[214] It pointed out that, "Attack helicopter units provide a ground commander an aerial antitank force with a day and night mobility differential 10 to 20 times greater than armored reserves."[215] The 1976 edition considered aviation the second most responsive fires, after artillery. The 1976 edition, however, also reminded commanders that helicopters were vulnerable to massed artillery and enemy air defense systems. It discouraged commanders from using them in initial defense positions, preferring to hold them ir. reserve to counterattack the flanks of a penetration that has outrun its air defense umbrella.[216] This way the routes of ingress and egress would be primarily over friendly units

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[214]FM 100-5, 1976, 2-30.

[215]FM 100-5, 1976, 2-30.

[216]FM 100-5, 1976, 5-5 to 5-6.

The 1982 and subsequent editions give priority to aviation by emphasizing deep operations. The attack helicopter's mobility and lethality (when armed with Hellfire missiles) make it the commander's first choice for deep operations. The study of Joint Air Attack Teams (JAAT) and Suppression of Enemy Air Defense (SEAD) boomed during the eighties. Great effort was invested in cross-FLOT operations by aviation assets. By the late eighties, the attack helicopter battalion was the unrivalled champion of deep operations.

Major General Ostovich, commander of the U.S. Army Aviation Center, sees great promise in AirLand Battle Future. He claims, "Aviation will play a more important role than ever before on the future battlefield."[217] Corps aviation brigades will become maneuver units in their own right under AirLand Battle Future.[218] AirLand Battle Future also envisions corps air cavalry regiments.[219] From Active Defense to AirLand Battle Future, the role of aviation has steadily expanded.

The 1986 edition and AirLand Battle Future emphasize LIC and light infantry forces. They provide, as a result,

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[217]MG Rudolph Ostovich III, "Army Aviation in AirLand Battle Future," Military Review LXXI.2 (February 1991): 27.

[218]See Silvasy, Figure 4, 7. See also Ostovich, 27-28.

[219]Ostovich, 28 and Foss, 36.

the doctrinal justification for an expanded air assault and light helicopter capability. This further accentuates the trend toward increased reliance on aviation.

Closer cooperation with the Air Force

In other eras, the tension between the services has bled into the doctrine. This was most evident in the mid-fifties. The Army was threatened by the nation's increased reliance upon strategic nuclear forces. The Air Force was the main proponent for strategic nuclear forces. The massive retaliation strategy threatened to shift resources from the Army to the Air Force and cast the Army in a supporting role. The 1954 edition of Operations, affirmed testily that "Army combat forces do not support the operations of any other component."[220]

In contrast with this earlier period, from Active Defense through AirLand Battle Future, U.S. Army doctrine has promoted close cooperation with the Air Force. The 1976 edition of FM 100-5 coined the phrase "Air-Land Battle."[221] After removing the hyphen, this became the familiar title of the next two editions, demonstrating the emphasis the Army placed on cooperation with the Air Force.

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[220] FM 100-5, 1954, 4.

[221] FM 100-5, 1976, 8-1.

The 1976 edition acknowledged the need to strike the enemy's second and third echelon while destroying the first echelon. Accepting the limits of the Army's fielded equipment at the time, the 1976 edition counted on the Air Force to fight deep. The 1976 edition stated unqualifiedly that "the Army cannot win the land battle without the Air Force."[222] The 1982 edition introduced the deep battle and conceded that it would be fought primarily by the Air Force. The 1986 edition carefully addressed Air Force concerns that had been inadvertently raised by the 1982 edition. Each edition, including the on-going revision, translated into doctrine a carefully negotiated Tactical Air Command - TRADOC agreement.[223] The Army has consistently emphasized cooperation with the Air Force during the last two decades.

Synchronization

U.S. Army doctrine consistently underlined the importance of synchronization. Synchronization was one of the four tenets of AirLand Battle in the 1982 edition. The 1986 edition carried forward the tenets unchanged; the next edition will as well.[224]

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[222] FM 100-5, 1976, 8-1.

[223] Foss, 33 addresses the most recent TAC-TRADOC agreement.

[224] Foss, 24.

Synchronization, however, was a key element of the Active Defense as well. The 1976 edition called for "synchronized employment" of Army and Air Force Assets.[225] It stressed combined arms teamwork and identified eight battlefield systems that must be integrated.[226] The 1976 edition was less fond of the term "synchronization" than the editions that followed, but the principle was clearly central to getting maximum effectiveness from the many different weapon systems in the Active Defense doctrine.

Agility

U.S. Army doctrine also consistently underlined the importance of agility. Agility, like synchronization, was and will remain one of the four tenets of AirLand Battle doctrine.

Agility was prized by the writers of the Active Defense doctrine as well. The 1976 edition characterized the concentration of forces in the defense as a race.[227] In the Active Defense, the laterally arrayed forces shifted to block or counterattack the enemy penetration before the enemy could break through the defense. The 1976 edition told commanders they could destroy a numerically superior

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[225] FM 100-5, 1976, 3-8.

[226] FM 100-5, 1976, 3-10.

[227] FM 100-5, 1976, 3-5.

force if they were more agile. The 1976 edition, like those that followed, believed greater agility resulted from better intelligence, instantaneous communications, standard operating procedures, and contingency planning, as well as faster weapon platforms. Throughout the seventies and eighties, doctrine required force planners to organize and equip and commanders to train the U.S. Army so that it would be more agile than its enemies.

The Active Defense required a tactical mobility differential. AirLand Battle required both a tactical and an operational mobility differential. The emphasis on agility has increased.

Summary

While radical shifts in doctrine did occur, a backdrop of continuity was also present. The evolutionary elements of the doctrine are significant. In a descriptive work, it would be wrong to portray the change in doctrine as purely revolutionary. That is not the intent of this thesis.

This thesis seeks to identify the factors that shape doctrine. It does that by identifying factors that covary with doctrine across four turn points. The characteristics of doctrine that change in an evolutionary manner pass through those turn points unaltered. Their evolution is

caused by factors that are invariable. It is, as a result, impossible to demonstrate covariation.

The evolutionary changes, while significant, cannot be identified and explained by the methodology of this thesis. The next chapters, therefore, will focus on the independent variables that can explain the revolutionary changes in U.S. Army doctrine.

TABLE 2-1
REVOLUTIONARY CHANGES IN U.S. ARMY DOCTRINE FROM ACTIVE
DEFENSE THROUGH AIRLAND BATTLE FUTURE

| 1976 Active Defense	1982 AirLand Battle	1986 AirLand Battle	1992 ALB Future
Attrition	Maneuver	Maneuver	Nonlinear Maneuver
Firepower	Initiative Momentum		
Weapon System Defense	Human Factors Offense		
	Deep Attack	Deep Operations	
Linear First Battle	Nonlinear Operational Level	Operational Level +	
How to Fight Europe	How to Think Global	Allied Concerns	
Terrain		Lightness, LIC	Deployability
	Integrated Battlefield	Denuclear-ization	
	Techno-Optimism	Techno-Optimism +	Futurism
		Sustainment	Logistics in Motion
		Jointness	

120
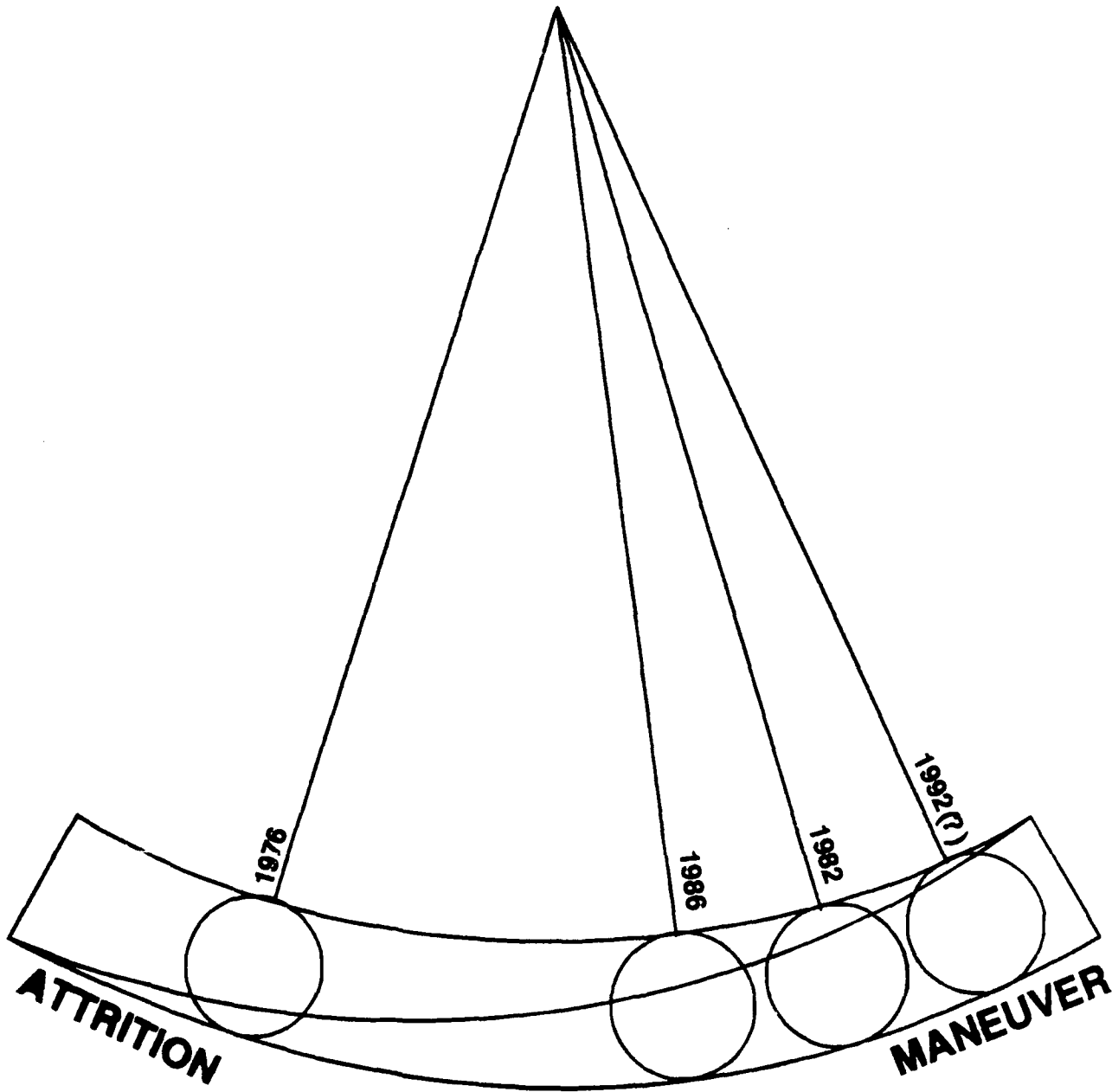
Figure 2-1.   Swings in Doctrine: From Active Defense to AirLand Battle Future.

121

CHAPTER 3

EXTERNAL CAUSES OF DOCTRINAL CHANGE

The doctrinal change in the Army can be explained at two levels of analysis: the systemic and the unit. The systemic level of analysis assumes the doctrinal change represents the Army's rational response to changes in its environment. In a systemic analysis, external variables and constants explain change and continuity in the Army's doctrine.

The unit level of analysis loosens the assumption that the Army behaves rationally. It attributes doctrinal change to changes in the Army, not its environment. In unit level analysis, internal variables and constants explain change and continuity in the Army's doctrine.

The next two chapters examine first external and then internal variables in the hopes of deriving a composite explanation of the revolutionary change in the Army's doctrine during the last two decades. Constancy in either external or internal factors provides clues to the evolutionary changes in Army doctrine.

A simple plan will be consistently followed. A hypothesis will postulate a relationship between the change

in doctrine and the independent variable. A historical precedent will validate the hypothesis. Then the change in the independent variable will be described and related to the change in doctrine. When the change in an independent variable matches the pendulum-like swing in doctrine, we have reason to suspect that the change in doctrine is caused by change in that independent variable. Whenever possible, I will present evidence that corroborates the causal relationship between the independent variable and doctrine.

This analysis strives to identify the more significant factors that shape doctrine and the relationship between these factors. To discover these relationships and how they change, we must consider a large number of variables across a period long enough to enclose significant change in doctrine. This analysis will pursue synthesis at the expense of definitive detail. Rarely will it conclusively prove causality.

Traditionally, analysts attribute doctrinal change to change in the Army's environment, to external variables. Michael Howard, already cited in the first chapter, believes operational requirements, technology, and financial resources shape doctrine.[1] His "triangular dialogue" considers only external variables.

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[1]Michael Howard, "Military Science in an Age of Peace," RUSI, Journal of the Royal United Services Institute for Defence Studies 119 (March 1974): 5.

This chapter relies on Howard's taxonomy of the external variables. It will examine change in military applications of technology and the Army's budget. It will examine change in both the threat and our national strategy, as these two factors determine the Army's operational requirements.

Historically, armies most radically alter their doctrine after defeat. Armies rationally reform doctrine that fails. Failure attracts public and political scrutiny that in turn promotes doctrinal innovation. This section will, therefore, also consider failure in war and political criticism as external variables that may shape doctrine.

The Army usually attributes doctrinal change to external variables. The Army claimed changes in external variables caused all four revisions of FM 100-5. The 1976 edition argued that the growing lethality of modern weapons and the numerical superiority of the Soviet Union obliged the U.S. Army to rely on the Active Defense.[2] The 1982 edition argued that the lethality of modern weapons, the numerical superiority of the Soviets, and the Soviet offensive doctrine made linear defenses obsolete.[3] Its

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[2] See for example U.S. Army, FM 100-5, Operations (Washington, D.C.: Department of the Army, 1 July 1976), 1-1.

[3] U.S. Army, FM 100-5, Operations (Washington, D.C.: Department of the Army, 20 August 1982), 1-1 to 1-2.

response to the changing technology and threat was maneuver and the deep attack. GEN Richardson explained that external critics, particularly those from NATO and the Air Force, prompted the 1986 revision.[4] According to GEN Foss, change in national military strategy, more than any other factor, triggered the on-going revision of FM 100-5.[5] Recent technological developments are only a secondary reason for revising the Army's current doctrine. The Army cited no internal variable in its explanation of any of the editions.

Attributing doctrinal change to external factors is exculpatory. If doctrine tracks with these factors, then the change in doctrine is not the Army's fault, nor can it be written off as merely reflecting the Army's parochial interests. If doctrine is externally determined, it would then represent the objectively optimal method of fighting within external constraints.

Technology

Martin van Creveld argued that "War is permeated by technology to the point that **every** single element is either

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[4]General William R. Richardson, "FM 100-5: The AirLand Battle in 1986," Military Review LXVI.3 (March 1986): 6-10.

[5]GEN John W. Foss, "AirLand Battle-Future," Army 41.2 (February 1991): 20-21.

governed by or at least linked to it."[6] Many military

historians have chronicled the impact of technology on the

way armies fight. The longbow, the musket, the machine gun,

the tank are but a few of the technological changes that

punctuated land warfare. These four were responsible in

their time for dramatic changes in the way nations fought.

History provides ample evidence that technological advance

causes doctrinal change.

The Army often cites technology as the proximate

cause for doctrinal change. In both 1976 and 1982, doctrine

writers contended that technology altered the modern

battlefield and the nature of warfare and obliged the Army

to change its doctrine. The on-going revision of FM 100-5

seeks to exploit new advances in intelligence collection and

fusion technologies that promise to "allow us to know where

significant enemy forces are almost all the time."[7] The

Army claims advances in technology sparked three of the four

revisions examined in this thesis.

Robert Jervis and George Quester articulated a more

specific, theoretical relationship between technology and

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[6]Martin van Creveld, Technology and War: From 2000 B.C.
to the Present (New York: The Free Press, 1989), 311.
Emphasis appeared in the original.

[7]Foss, 20-21 and MG Stephen Silvasy, Jr., "AirLand
Battle Future: The Tactical Battlefield," Military Review
LXXI.2 (February 1991): 3.

doctrine.[8] They argued that certain technologies favor offensive doctrines, others favor defensive doctrines. Quester specifically argued that technologies that increase mobility favor the offense.[9] It follows that the opposite is true: technologies that increase firepower favor the defense.

Quester used the First and Second World Wars to argue his point. During World War I, the machine-gun, barbed wire, and artillery allowed defensive doctrines to dominate. The bloody stalemate of trench warfare resulted. During World War II, the tank and the close support aircraft broke the stalemate. They restored mobility to the battlefield and allowed an offensive doctrine -- the Blitzkrieg -- to dominate.

The 1976 edition of FM 100-5 affirmed the superiority of the defense. Succeeding editions argued that the offense was dominant. If technology caused this shift in doctrine, firepower technologies should be prevalent in the early seventies, and mobility technologies should resurge in the eighties. A fundamental shift in technology should coincide with both of the editions.

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[8]George H. Quester, _Offense and Defense in the International System_ (New York: John Wiley and Sons, 1977). Robert Jervis, "Cooperation Under the Security Dilemma," _World Politics_ 30.2 (January 1978): 186-214.

[9]Quester, 3.

Some analysts argue that technology was
fundamentally constant in the seventies and eighties. In a
recent article, for example, William Lind and four military
officers identified four generations of land warfare.[10] The
first was characterized by the smoothbore musket; the
second, by the machine gun and indirect fire; the third was
distinguished by ideas (maneuver) not technology; and the
fourth would be signalled by the employment of directed
energy weapons. They do not deny that there were minor
technological innovations in the last two decades. They
argue that none of the technological innovations changed the
fundamental nature of war.

Others analysts see one fundamental shift in
technology that corresponded with the 1976 edition.[11] The
1973 Arab-Israeli War was widely interpreted as signalling
the dawn of the missile age. Anti-tank missiles and anti-
aircraft missiles challenged the dominance of the tank and
the aircraft, leading many to conclude that the offensive

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[10]William S. Lind, John Schmitt, Joseph W. Sutton, Keith
M. Nightengale, and G. I. Wilson, "The Changing Face of War:
Into the Fourth Generation," Military Review LXIX.10
(October 1989): 3-6.

[11]See for example Richard E. Simpkin, Race to the Swift:
Thoughts on Twenty-First Century Warfare (New York:
Brassey's Defence Publishers, 1985), 7. In Figure 1,
Simpkin records a peak in missile technology in both the
area of air defense missiles and anti-tank missiles. See
also the discussion on tank design in Chris Bellamy The
Future of Land Warfare (New York: St. Martin's Press, 1987),
192-202.

systems had met their defensive match.[12]   These missiles were inherently defensive.   The anti-aircraft missile targeted aircraft that violated the airspace of the missile unit.   The anti-tank missile was able to attrit an approaching force but unable to close with a defending force.   It could destroy tanks at ranges beyond their ability to return accurate fire, but it had a slow rate of fire and could not be fired while the platform was moving. Married with the helicopter, it provided a potent and responsive counterattack force.

The influence of this technological development was apparent in the 1976 edition.   The second chapter described the increasing lethality of weapons, by weapon system, since 1945.   Most of the weapons exhibited a continual increase in lethality with no clear turn points.   However, a precipitous and revolutionary increase was apparent in anti-tank and anti-aircraft missile lethality in the late sixties and early seventies.[13]   In particular, the 1976 edition emphasized that the introduction of the tube-launched, optically-tracked, wire-guided (TOW) missile had produced a "leaping crossover," giving missiles a considerable range

[12]Quester, 170.   Quester acknowledges that the advances in the anti-tank and anti-aircraft missile favored the defense.   Also, Jeffrey Record, "The October War: Burying the Blitzkrieg," Military Review LVI.4 (April 1976): 19-21.

[13]U.S. Army, FM 100-5, Operations (Washington, D.C.: Department of the Army, 1 July 1976), 2-8, 2-18, and 2-19.

advantage over tank cannons for the first time. The 1976
edition considered the attack helicopter a "new" and
"unique" capability,[14] but warned the commander that the
advances in air defense missiles increased the vulnerability
of the platform, making it a poor system for the close in
fight.[15] The 1976 edition considered the short range
counterattack a better use of the attack helicopter than the
attack. The second chapter also emphasized dramatic
increases in mine lethality and size that permitted the
rapid delivery of scatterable mines.[16] These highlights,
taken directly from the manual, reveal that the authors
believed advances in missile and mine technology had
accentuated the dominance of the defense in the mid-
seventies.

While advances in technology may partly explain the
1976 edition, there is little evidence that technological
change played a role in the decision to write the 1982
edition. No technological advance in mobility corresponded
with the return to a maneuver doctrine in 1982.

In fact, in describing "the next battlefield," the
1982 edition presented a suite of technologies identical to

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[14]FM 100-5, 1976, 2-21.

[15]FM 100-5, 1976, 5-5.

[16]FM 100-5, 1976, 2-25.

those that inspired the 1976 edition.[17]   In an article in
Military Review introducing the AirLand Battle doctrine, the
authors of the 1982 edition explained why FM 100-5 needed to
be revised.[18]   They identified a number of presumed
shortcomings in the 1976 edition: its defensive, firepower,
attrition bias drew the most fire.   No new technology,
however, was cited to explain the break with the previous
edition.   On the contrary, though the technologies had
remained constant, the doctrine changed dramatically.
Clearly, something else caused the doctrine to change.

The deep battle was the most technologically
demanding part of AirLand Battle doctrine.   GEN Starry,
TRADOC Commander at the time, however, affirmed that "Even
using conservative planning factors, interdiction of
critical enemy second echelon elements is possible within
existing means."[19]   The deep battle was a concept, a way of
thinking about fighting.   The concept could be implemented
with existing equipment.   No technological advance had
generated the idea.

The deep battle did, however, serve to justify the
acquisition of a whole series of new equipment.   In TRADOC

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[17]FM 100-5, 1982, 1-1 to 1-3.

[18]Huba Wass de Czege and L. D. Holder, "The New FM 100-5," Military Review LXII.7 (June 1982): 53-55.

[19]General Donn A. Starry, "Extending the Battlefield," Military Review LXI.3 (March 1981): 46.

131

publications, the new operational concept was tied directly to Corps 1986, an acquisition plan that would modernize and extend the corps ability to "see and attack in depth."[20] This revolutionized the relationship between technology and doctrine. Technology was not causing doctrine to change; beginning in 1982, doctrine sought to guide technology.

There was a great deal of speculation, in the early eighties, that a technological revolution was imminent. When the 1982 edition was drafted, the United States and its NATO allies were fascinated by the promise of emerging technologies (ET).[21] Laboratories predicted that in the eighties smaller and more lethal charges, more precise guidance systems, more capable and resilient microelectronics, more sensitive sensor technology, and true all-weather terminal homing would revolutionize warfare by allowing the destruction of armored, mobile targets 150 kilometers beyond the FLOT. ET held the promise of near-nuclear effects with conventional munitions.

Two projects in particular symbolized the ET revolution. The Defense Advanced Research Project Agency's

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[20]U.S. Army, TRADOC Pam 525-5, AirLand Battle and Corps Operations -- 1986 (Fort Monroe, VA: HQ TRADOC, 25 March 1981), 4.

[21]For a concise description of ET in the early eighties, see John A. Burgess, "Emerging Technologies and the Security of Western Europe," in Securing Europe's Future, eds. Stephen J. Flanagan and Fen Osler Hampson (Dover, MA: Auburn House Publishing Company, 1986), 64-84.

Assault Breaker program envisioned the delivery of precision-guided munitions by long-range missiles against targets identified by a synthetic aperture radar. The Sense and Destroy Armor (SADARM) program combined infrared and millimeter wavelength radar homing in an artillery shell's anti-tank submunition.

Both NATO and the United States generated new doctrine in the early eighties to guide the development of ET. The United States advanced the Integrated Battle and Corps 86, pieces of which were absorbed into AirLand Battle doctrine. The European counterpart was Follow-on Forces Attack (FOFA). Eleven cooperative U.S.-European development projects aimed at ET technologies were begun. Two important points, however, should be underlined.

First, ET was not a demonstrated capability. It was a prediction. The United States exhibited a uniquely durable faith in the prediction despite abundant evidence that the time required to move ET from the laboratory to the battlefield had been severely underestimated.

The Assault Breaker failed. It was abandoned. SADARM, under development for a decade and a half, is still years from production. Few ET breakthroughs were attainable in the near-term. By 1985, most European governments

believed ET predictions had been overly optimistic.[22]
Widespread skepticism flourished by the late eighties in
European capitals.[23]

Curiously, the United States remained singularly
confident that ET would live up to its promise. The
technological track record that discouraged Europeans did
not phase Americans. Repeated shortfalls, disappointments,
and missed milestones did not temper American enthusiasm for
ET.

Second, ET promised a revolution in firepower not
mobility. FOFA and Allied Tactical Publication (ATP) 35A,
NATO's equivalent to FM 100-5, are attrition-firepower
doctrines.[24] Only in the United States did military leaders
conclude that the ability to destroy the enemy's second
echelon by conventional fires would restore the commander's
freedom to maneuver.[25]

We saw earlier that the same suite of demonstrated
technologies led American military leaders to radically

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[22]The previously cited chapter by Burgess is an example
of the European change of heart.

[23]Based on interviews with Marisol Tourraine, French
Ministry of Defense, Paris, October and November 1985, by
the author.

[24]For a description of ATP 35A, see Chris Bellamy, The
Future of Land Warfare (New York: St. Martin's Press, 1987),
124-129.

[25]Starry, 43.

different conclusions in 1976 and 1982. With ET, the same prediction of technological advance led military leaders on either side of the Atlantic to very different conclusions. This should lead us to suspect that other variables intervene decisively in the relationship between technology and doctrine.

A technological advance did not provoke the 1982 edition of FM 100-5. Rather, starting in 1982, doctrine sought to drive technology. The 1986 edition was not provoked by a technological advance, either. It carried forward the 1982 edition's description of the next battlefield, almost word for word. GEN Richardson, TRADOC Commander in 1986, made no reference to any change in technology in his list of reasons for revising FM 100-5.[26] A common suite of technology spans all three editions.

GEN Foss, the current TRADOC Commander claims a technological advance partially caused the on-going doctrinal reassessment.[27] The AirLand Battle Future studies assumed a significant advance in sensors, intelligence fusion, and long-range anti-armor munitions. The next edition of FM 100-5 will translate into doctrine the fruits of the AirLand Battle Future studies long before the assumed

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[26]Richardson, 4-11.

[27]Foss, 20.

technologies are fielded. The pattern set in 1982 continues.

The gap between doctrine and capabilities will widen with the publication of the new FM 100-5. The technologies that GEN Foss identifies will not be fielded before the end of the nineties. JSTARS will allow commanders to detect large unit movement 250 kilometers beyond the FLOT. However, JSTARS is currently scheduled to begin full-scale production in 1995. The budget crunch may cause it to slip back further. When JSTARS is fielded, the corps commander will have no organic system that can strike a target that deep in the enemy's rear. To see 400 kilometers deep and hit targets beyond 200 kilometers, the corps commander in the nineties will rely on the Air Force, as his counterpart in the seventies and eighties did. Clearly doctrine is still in front of technology.

It is not clear why the ability to see and attack targets 200 kilometers beyond the FLOT requires a changed doctrine. The technologies that will be fielded in the nineties are the long-awaited capabilities programmed in Corps 86, that inspired the 1982 edition of FM 100-5. The 1982 edition designed the deep battle concept so that it could incorporate then current and Corps 86 technologies.[28] In fact, to realize the full potential of the deep battle

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[28]Wass de Czege and Holder, 57.

required the destruction of units deep in the enemy's rear. JSTARS and ASAS, ATACMS with a terminally-guided submunition will finally give the corps commander the capability doctrine writers foresaw in the early eighties. Just as capabilities are about to catch up with doctrine, doctrine appears to be stretching its stride.

AirLand Battle Future began as a study aimed at determining "how the Army [would] fight the mid- to high-intensity battle in the year 2004, and the impact on doctrine, organization, materiel, training, and leader development needed to execute the fight."[29] Translating the results of that study into current doctrine in 1992 seems premature.

Furthermore, the technologies GEN Foss identifies increase the firepower of units. The only increase in mobility technology, current or predicted, that corresponds with the most recent decision to revise FM 100-5 is the demonstration and fielding during Desert Storm of global position location devices (SLGR). As useful as SLGR may be, it is doubtful that it could explain a shift in the balance between offense and defense. If technology were truly driving doctrine, the next edition should favor the defense. On the contrary, the next edition of FM 100-5 will be even

[29]CAC History Office, U.S. Army Combined Arms Center 1989 Annual Historical Review (Fort Leavenworth, KS: U.S. Army Combined Arms Center, 1990), 39.

more emphatic about the superiority of the offense and maneuver than the 1982 edition.

In summary, advances in technology may partially explain the Active Defense doctrine. In 1976, dramatic increases in firepower corresponded with a doctrinal shift that favored the defense. In 1982, though there was no evidence of an achieved or projected breakthrough in mobility technology, doctrine swung back to favor the offense. Though advances in firepower technologies dominate, editions of FM 100-5 grant maneuver pride of place.

Starting in 1982, doctrine sought to guide technology, reversing the traditional relationship. Fielded technology, even demonstrated technology, was not driving the change in doctrine. Rather, doctrine projected a technological capability and adapted to this assumed capability.

Technology, however, proved difficult to bridle. Technologies foreseen for the eighties will not be available until the late nineties, perhaps later with the projected decline in the defense budget. Nonetheless, AirLand Battle Future repeated the pattern set in 1982.

National Strategy

National strategy delineates the purposes of military force and the scenarios that should guide military

planning. A rational military doctrine should be aligned

with national strategy. The Army's doctrine should be aimed

at achieving the goals and succeeding in the scenarios laid

out in the national strategy.

Barry Posen analyzed the military doctrines of the

European powers prior to the Second World War.[30] He found a

strong correlation between national strategy and military

doctrine. France and Great Britain were status quo powers

with defensive strategies. They developed defensive

doctrines. Germany was a revolutionary power with an

offensive strategy. It developed an offensive doctrine.

Posen considered other explanatory factors and found them

less powerful. He concluded that national strategy was more

strongly correlated with doctrine than technology or

organization theory.

Changes in strategy have caused significant changes

in the U.S. Army doctrine in the past. In the fifties, the

Eisenhower administration's "New Look" strategy entailed a

much greater reliance on nuclear weapons. Army doctrine

reflected national strategy by becoming more concerned with

the nuclear battlefield. Concerned with losses, the Army

adopted the pentomic organization. Doctrine envisioned a

"cellular" battlefield, where units would fight dispersed

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[30]Barry Posen, The Sources of Military Doctrine: France,
Britain, and Germany Between the World Wars (Ithaca, NY:
Cornell University Press, 1984).

and isolated by nuclear fires.[31] The national strategy of
the Kennedy Administration placed greater emphasis on
counterinsurgency warfare than the Eisenhower Administration
had. The Army interest in doctrine for fighting
counterinsurgency warfare blossomed in the early sixties as
a result.[32] In both cases, a shift in national strategy
caused doctrinal innovation.

The broad outline of the national strategy remains
constant from 1976 onward. Containment of the Soviet Union,
territorial security, prosperity, free trade, and the
promotion of democracy are enduring themes. Army doctrine
responded differently to two other constant themes: our
commitment to acting in concert with allies and to
preventing the proliferation of nuclear weapons.

Preventing the proliferation of nuclear weapons has
been a top priority of American foreign policy. The Non-

[31]For a thorough discussion of the pentomic era see A.
J. Bacevich, The Pentomic Era: The U.S. Army Between Korea
and Vietnam (Washington, D.C.: National Defense University
Press, 1986) and Donald Alan Carter, "From G.I. to Atomic
Soldier: The Development of U.S. Army Tactical Doctrine,
1945-1956," Ph.D. dissertation, Ohio State University, 1987.

[32]See Stephen Lee Bowman, "The Evolution of United
States Army Doctrine for Counterinsurgency Warfare: From
World War II to the Commitment of Combat Units in Vietnam,"
Ph.D. dissertation, Department of History, Duke University,
1985. While Bowman argues that organizational process and
bureaucratic politics prevented the Army from developing an
effective doctrine for counterinsurgency warfare despite
presidential interest, the point remains that a shift in
national strategy provoked doctrinal innovation in 1961.

Proliferation Treaty (NPT) is the cornerstone of the U.S.
policy.[33] This treaty is exceptional because it codifies
nuclear asymmetry between the signing nations. The nations
that do not have nuclear weapons agreed to not acquire them.
The nations that had nuclear weapons agreed to reduce their
nuclear weapon stockpiles through arms control and to assist
the have-nots in developing the peaceful uses of nuclear
energy. One hundred and eleven nations signed the treaty.
The U.S. and the Soviet Union issued parallel declarations
stating:

> their recognition that the threat or use of such
> weapons would put the peace and security of all
> states in doubt. As members of the Security
> Council, they pledged to take action in accordance
> with the U.N. Charter to assist an NPT country
> threatened with nuclear weapons and to counter the
> threat or use of such weapons.[34]

The superpowers recognized that their use of nuclear
weapons, even threatening their use, would demonstrate the
utility of nuclear weapons and spark proliferation. Both
agreed to desist from rattling their nuclear sabers.

The 1982 edition was clearly inconsistent with the
U.S. position on non-proliferation. Its insensitive
language about the offensive use of nuclear weapons,

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[33]For a concise explanation of the terms of the treaty,
see Stanford Arms Control Group, International Arms Control:
Issues and Agreements, eds. Coit D. Blacker and Gloria Duffy
(Stanford, CA: Stanford University Press, 1984), 153-172.

[34]Stanford Arms Control Group, 158.

particularly the reference to their use during contingency operations was inflammatory and contrary to the U.S. declaration. The emphasis on nuclear weapons in the 1982 edition also worried our NATO allies.

Every administration since World War II has emphasized the importance of acting in concert with our allies. Each has accorded Europe the highest priority in our strategy. The largest share of the Army was always tagged for war in Europe. If strategy was an important determinant of Army doctrine, then Army doctrine should reflect this emphasis on Europe and a concern for combined operations with Europeans.

Neither the Active Defense nor the AirLand Battle doctrine, however, were acceptable to the Europeans. The Active Defense traded space for time. This contradicted the NATO precept of forward defense Forward defense required the tenacious defense of every inch of German soil. An unswerving commitment to forward defense was a fundamental tenet of the Alliance. It was the compensation Germany received for accepting the heavy presence of foreign troops on its soil. As a result, shortly after Active Defense was published, the term "Active Defense" was blackballed in NATO.[35]

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[35]Author's personal experience in .IATO, while serving with the 11th Armored Cavalry Regiment in Fulda, FRG.

AirLand Battle suffered a similar fate. Europeans felt the 1982 doctrine was far too offensive and feared it might be destabilizing. Its emphasis on cross-FLOT operations, translated in NATO to mean cross-border operations if NATO defends at the border, was inconsistent with ATP 35. Furthermore, in admitting penetrations were inevitable, AirLand Battle again confronted the hallowed principle of forward defense.

NATO rejected AirLand Battle doctrine, adopting instead Follow-on Forces Attack (FOFA) and a new combined doctrine (ATP 35A).[36] FOFA envisions attacks against targets in the enemy's rear by air and indirect means only. FOFA does not envision cross-FLOT maneuver. ATP 35A reads more like the Active Defense than AirLand Battle. It called for an elastic defense by mobile armored forces. Its exclusive focus on defensive battle was antithetical to AirLand Battle enthusiasts.

In addition, the 1982 edition's discussion of nuclear weapons caused concern in the Alliance. It failed to adequately underline the political constraints on their use, leading some to wonder whether the U.S. was inching toward tactical nuclear warfighting while the rest of NATO saw tactical nuclear weapons primarily as deterrents to general war. The 1982 edition was sure to upset Europeans

[36]Bellamy, 124-129.

143

who had been sensitized by the neutron bomb fiasco four years earlier. The 1982 edition was published on the eve of the intermediate range nuclear forces (INF) deployments. It is not surprising that the 1982 edition was criticized by the Europeans. GEN Richardson admitted that the 1986 edition was needed, in part, to smooth European feathers that had been ruffled by the 1982 edition.[37]

The authors of both the 1976 and the 1982 editions wanted a doctrine compatible with the doctrines of other NATO nations. The 1976 edition was carefully coordinated with the West German manual HDv 100/100, Command and Control in Battle, published three years earlier.[38] The continuing influence of German doctrine was apparent in the 1982 edition. The emphasis on mission orders (auftragstaktik) and the need to designate and sustain the main effort (schwerpunkt) was inspired by German doctrine.[39]

The European rejection surprised the authors of the 1976 edition. GEN DePuy carefully coordinated the 1976 edition with the German Army and believed the Active Defense

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[37]Richardson, 8-9.

[38]MAJ Paul H. Herbert, "Deciding What Has to Be Done: General William E. DePuy and the 1976 Edition of FM 100-5, Operations," Leavenworth Papers 16 (Fort Leavenworth, KS: Combat Studies Institute, 1988): 61-68.

[39]John L. Romjue, "From Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1982," TRADOC Historical Monograph Series (Fort Monroe, VA: United States Army Training and Doctrine Command, June 1984): 58-59.

was a mutually agreed "military-political compromise"
between the German forward defense and TRADOC's highly
mobile defense.[40] Neither German nor American military
officers believed the remaining differences between U.S. and
German doctrine were cause for concern. In retrospect,
however, the differences seem consequential. The purpose of
the defense, according to HDv 100/100, was "to hold a
certain area against all attacks, thus preventing the enemy
from advancing into a region to be protected."[41] The most
desirable outcome was "to repel the attack as far forward as
possible [and] even in front of the defensive area."[42] HDv
100/100 proposed a much less elastic defense than the 1976
edition of FM 100-5.

European objections to AirLand Battle, in contrast,
were well known prior to the publication of the 1982
edition. TRADOC Pam 525-5 AirLand Battle and Corps
Operations -- 1986, published in March 1981, evoked strong
European objections. The draft of the 1982 edition went
forward unchanged.

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[40]Romie L. Brownlee and William J. Mullen III, Changing
an Army: An Oral History of General William E. DePuy, USA
Retired (Carlisle Barracks, PA: United States Military
History Institute, 1987), 188-189.

[41]Federal Republic of Germany, Heer, Regulation 100/100,
Command and Control in Battle (Bonn: Federal Office of
Languages and the Army Staff, September, 1973), 27-1,
hereafter cited as HDv 100/100.

[42]HDv 100/100, 27-1 to 27-6.

Though our national strategy emphasized allied relationships, there is strong evidence that in 1976 and 1982 the U.S. Army committed the "sin of unilateralism."[43] Other factors, factors more influential than strategy, shaped doctrine.

The major themes of our national strategy remained constant, but the military tasks derived from the strategy evolved. The years since 1976 break down into four distinct phases.[44]

The strategy of the sixties tasked the military with being prepared to fight 2 and 1/2 wars: a major war with the Soviet Union in Europe, a major war with China in the Far East, and a lesser contingency elsewhere.[45] This strategy required the military to be able to respond to a coordinated attack by both communist powers simultaneously.

In the late sixties, the Sino-Soviet rift was unmistakable. It was unrealistic to continue treating

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[43]Robert W. Komer attributes this phrase to GEN David Jones, former Chairman of the Joint Chiefs of Staff, in his chapter "Strategy and Military Reform," in The Defense Reform Debate: Issues and Analysis, eds. Asa A. Clark IV and others (Baltimore, MD: The Johns Hopkins University Press, 1984), 10.

[44]For a concise review of the evolution of strategy from the sixties through the Reagan years, see Jeffrey Record, Revising U.S. Military Strategy: Tailoring Means to Ends (New York: Pergamon-Brassey's, 1984) and David C. Hendrickson, The Future of American Strategy (New York: Holmes and Meier, 1987).

[45]Record, 24.

communism as a monolithic bloc. President Nixon and Henry
Kissinger took advantage of the split by normalizing
relations with China. China, previously a Soviet ally,
became a strategic counterweight to the Soviet Union.

First expressed in 1969, the Nixon Doctrine reduced
the military requirements consistent with this change in
national policy. He tasked the military with preparing to
fight 1 and 1/2 wars: a war with the Soviet Union in Europe
and a lesser contingency elsewhere. This requirement guided
planning for general purpose forces from 1970 to 1979.

This significant change in national strategy
explains, in part, the 1976 edition of FM 100-5. A 1 and
1/2 war military strategy focused the military on the battle
with the Soviet Union in Europe. The 1976 edition, more
than any other edition, was focused on the European central
battle.

In fact, the 1976 edition neglected the "lesser
contingency" or half war. The authors justified their
exclusive focus on Europe in two ways: war in Europe was the
most demanding and most dangerous scenario. They assumed
that if they could win in Europe, they would be able to win
the half war as well.[46] This assumption, valid or not,
justified a 1 war doctrine underneath a 1 and 1/2 war
requirement. Though Europe remained the most demanding and

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[46] FM 100-5, 1976, 1-2.

most dangerous scenario, the 1982 edition made a different

assumption and focused doctrine differently.

The Soviet invasion of Afghanistan and the fall of

the Shah of Iran jolted our national strategy out of a

decade of stagnation. In response, President Carter

formally committed U.S. military power to the defense of

Southwest Asia (SWA). In the 1980 State of the Union

Address, he declared that

> . . . any attempt by any outside force to gain
> control of the Persian Gulf region will be regarded
> as an assault on the vital interests of the United
> States of America, and such an assault will be
> repelled by any means necessary, including military
> force.[47]

The Carter Doctrine tasked the military with preparing to

fight 1 and 2/2 wars: a major war with the Soviet Union in

Europe, a lesser effort by the Soviet Union in SWA (a

supporting attack for the war in Europe or an attack limited

to SWA), and a lesser contingency.[48]

The Carter Doctrine correlates with the

globalization of the U.S. Army doctrine in the 1982 edition.

The greater emphasis on contingency operations coincided

with the increased emphasis on SWA. The more balanced

treatment of Europe and the Pacific in the chapter on

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[47]President Jimmy Carter, "State of the Union Address,
23 January 1980," Weekly Compilation of Presidential
Documents XVI (28 January 1980): 194-200.

[48]The label 1 and 2/2 wars is taken from Komer, 7.

combined operations coincided with the relative decline in emphasis on the European theater. Under the surface, however, it is hard to show that the change in strategy caused any of the major changes in Army doctrine in 1982.

The significant features of the 1982 edition -- the deep battle, the offensive bias, the maneuver perspective -- were emerging before the Carter Doctrine was announced, before the Shah fell, and before the Soviet Union invaded Afghanistan. John Romjue, the TRADOC Historian, traces the origins of the deep battle to the Battlefield Development Plan in 1978.[49] The 1982 edition derived from the conceptual studies of 1979 and 1980: the Central Battle, the Integrated Battlefield, and the Extended Battlefield. All three were designed against a European scenario, a Soviet threat. The first two had reached their conclusions before the State of the Union Address in 1980. There is no evidence that the central concepts of the 1982 edition were adjusted to take into account the change in strategic priorities.

In June 1979, 5 months prior to the Soviet invasion and the fall of the Shah, General Edward C. Meyer, then serving as the Deputy Chief of Staff for Operations and Plans in the Department of the Army, encouraged GEN Starry to revise the 1976 edition, in part because it "was written

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[49]Romjue, 27.

for battle in Central Europe" and "lacked worldwide doctrinal application."[50]   One month after the State of the Union Address, in the February 1980 White Paper, GEN Meyer, now Chief of Staff of the Army, stressed that

> The most demanding challenge confronting the U.S. military in the decade of the eighties is to develop and demonstrate the capability to successfully meet threats to vital U.S. interests outside of Europe, without compromising the decisive theater in Central Europe.[51]

The February 1980 White Paper only influenced the 1982 edition in a superficial way. It had a significant and immediate impact on the Army's thinking about the next war, however. It launched a number of studies aimed at modifying the force structure. The Light Division Study and the High Technology Test Bed project both began in 1980.[52] Evidently, the Carter Doctrine was warmly received by an Army ready to shift its focus from Europe.

The Army took six years to adjust to the Nixon doctrine; it reacted to the Carter Doctrine in a month. The lag between change in strategy and doctrine in the seventies contrasts sharply with the promptitude in the early

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[50]Cited in Romjue, 30, from a letter from GEN Meyer to GEN Starry, dtd 13 June 1979.

[51]Chief of Staff, U.S. Army White Paper 1980, A Framework for Molding the Army of the 1980s into a Disciplined , Well-Trained Fighting Force, 25 February 1980.

[52]See U.S. Army, TRADOC Annual Historical Review, FY 1980, Chapter I, and FY 1981, Chapters III and IV.

eighties. Factors internal to the Army intervened in the relationship between strategy and doctrine. These factors slowed the adjustment of doctrine in 1976 and accelerated doctrinal adjustment in 1982.

The Army, beginning in 1980, slipped into what has been called the "likelihood fallacy."[53] While a Soviet attack in Europe was the most dangerous scenario, it was also the least likely. GEN Meyer believed that "wars outside of Europe, while less important from the standpoint of national survival, were more likely to occur than a European war."[54] GEN Meyer encouraged the Army to focus on the more likely scenarios.

GEN Meyer's focus on contingencies outside Europe was probably no more "fallacious" than GEN DePuy's exclusive focus on Europe. The Nixon and Carter Doctrines both gave the defense of Europe the highest priority. Unique assumptions in 1976 and 1982 resulted in two distinct doctrinal responses to a constant strategic priority. The 1976 edition assumed that an army prepared to win in Europe could handle any other contingency; the 1982 edition assumed war in Europe was unlikely. The factors, mostly internal, that explain the Army's choice of assumptions are at least

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[53]Komer, 8.

[54]Romjue, 30.

as important to explaining change in doctrine as national strategy.

As the 1982 edition was published, the military strategy of the Reagan Administration was taking shape.[55] The Reagan Administration replaced the 1 and 2/2 war strategy with what is commonly called a 3 war strategy.[56] Actually, the Reagan Administration tasked the military with preparing for a three-front, global war with the Soviet Union.

The Reagan Administration believed that it was foolish to think a war with the Soviet Union would remain limited to one theater or two. The Soviets enjoyed numerical superiority and interior lines of communication. The Reagan Administration expected and recommended "horizontal escalation."[57] The military had to prepare to fight the Soviet Union in Europe, in SWA, and in the Pacific concurrently.

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[55] Caspar W. Weinberger, The Annual Report to the Congress for FY 1983 (Washington, D.C.: Department of Defense, 1982) included the first official expression of a new military strategy by the Reagan Administration.

[56] Hendrickson 163.

[57] Hendrickson, 158.

There was no half war in President Reagan's military strategy.[58] Caspar Weinberger, the Secretary of Defense, established six conditions for the use of force. These conditions were so constraining that a major intervention by ground forces in the Third World was virtually precluded. The Reagan Administration, instead, talked tough about rolling back the ill-gotten Soviet gains from the seventies with freedom fighters, not U.S. soldiers.

Nonetheless, the Army continued planning for large-scale interventions by U.S. ground forces in the Third World. In 1983, the Army began a major restructuring toward the Army of Excellence (AOE). Sixteen divisions were stretched to man eighteen, of which seven were light and therefore primarily suited to contingency operations. They were deployable to SWA by air, but they would be severely outgunned by Soviet forces once they got there. The emphasis on contingency operations, and the decision to resort to light infantry units, had no origin in national strategy.[59]

The 1986 edition of FM 100-5 stressed the virtues of light infantry and explored low-intensity conflict more than

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[58]See Hendrickson, 166-167, for a thorough discussion of the confusion surrounding the Reagan Administration's military strategy for the Third World.

[59]Sam Damon and Ben Krisler (pseudonyms), "'Army of Excellence'? A Time to Take Stock," <u>Armed Forces Journal International</u> 122 (May 1985): 86 and 94.

any preceding edition had. In 1986, doctrine reflected force structure more than strategy. Factors other than strategy explain the Army of Excellence and therefore the related passages in the 1986 edition of FM 100-5.

The Bush Administration has had to adjust to dramatic changes in the international environment: the fall of the Berlin Wall, the renunciation of the Brezhnev Doctrine, the disintegration of the Warsaw Pact, the withdrawal of Soviet forces from Eastern Europe. The national strategy has begun to adjust to the revolutionary changes in the environment.

This past summer, "forward presence" displaced the traditional emphasis in the national strategy on "forward-basing."[60] Forward presence implies fewer forward-based forces. The next edition of FM 100-5 will reflect this change in national strategy. It will stress deployability more than previous editions.

As we saw in 1982, the emphasis on deployability in AirLand Battle Future predated the shift to forward presence in the national strategy. In fact, AirLand Battle Future was emphasizing deployability long before the revolutionary

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[60]National Security Strategy of the United States, 1990 (Washington, D.C.: The White House, 1990), 5.

change in the international environment began.[61] The
emphasis on deployability merely coincides with the shift to
forward presence. Changes in national strategy did not
cause the Army to place emphasis on deployability in AirLand
Battle Future; the Army had already elected to emphasize
deployability for other reasons.

In other ways, arguably more significant ways,
AirLand Battle Future is not aligned with national strategy.
Since 1989 our national strategy has been aimed at assuring
stability through mutual security.[62] In November 1990, the
United States and the Soviet Union signed the Conventional
Forces in Europe (CFE) treaty. The CFE treaty focuses on
tanks, armored personnel carriers, helicopters and attack
aircraft because the signatories sought to limit the
offensive capabilities of both sides.[63] Parallel talks
under the auspices of the Conference on Security and
Cooperation in Europe (CSCE) are aimed at eliminating the
most offensive and destabilizing elements in the doctrines

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[61]The Umbrella Concept and the emphasis on deployment to
regions other than Europe emerged in 1988. CAC History,
1989, 59-73.

[62]National Security Strategy of the United States, 1990,
9.

[63]Edward L. Warner and David A. Ochmanek, Next Moves: An
Arms Control Agenda for the 1990s (New York: Council on
Foreign Relations, 1989), Chapter 4, especially 112-113.

of NATO and Warsaw Pact nations.[84]   As the national strategy
renounces offensive capabilities, the next edition of FM
100-5 will justify a greater offensive capability than any
preceding edition.

Forces that are able to implement the AirLand Battle
Future concept will have substantially increased operational
range and lethality.   They will pose a significant offensive
threat on the continent.   If we lay the battlefield
framework of AirLand Battle Future on the map of Europe, we
discover that even if NATO forces are confined to the
territory that was formerly West Germany, the battle zone
and the detection zone will be in Poland.   This is wholly
inconsistent with ATP 35A.   A shift in this direction cannot
be reconciled with the spirit of CSCE that is sweeping
Europe.   It will be less acceptable to Europeans than even
the 1982 edition was.

AirLand Battle Future will widen the gap between
U.S. and European doctrines when national strategy calls for
increased cooperation with allies in combined operations.
In July 1990, NATO decided to form multinational corps.
Never before has NATO required a greater degree of doctrinal
standardization.   U.S. units at the division level and below
will be purely national, but U.S. divisions may operate in

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[84]John Borawski, Stan Weeks, and Charlotte E. Thomson,
"The Stockholm Agreement of 1986," Orbis 30.4 (Winter 1987):
643-662.

corps of a different nationality. AirLand Battle Future
wants to concentrate combat support assets at corps level.
The logistics plan in AirLand Battle Future unloads the
division, concentrating logistics at the brigade and corps.
How an AirLand Battle Future division will fight and sustain
itself in another nation's corps is unclear. AirLand Battle
Future is out of step with our national strategy; it is an
unmistakable example of unilateralism.

Changes in strategy can constrain doctrine, but they
can also remove constraints on doctrine. NATO military
planners have repeatedly argued the merits of fortifying the
inter-German border.[65] Obstacles are so inexpensive that an
investment in obstacle planning often yields a greater
improvement in combat effectiveness than an equal investment
in aircraft or tanks. In the past, political considerations
prevented NATO from placing obstacles on the inter-German
border. West Germany objected to any construction that
would make the line separating the two Germanies permanent.
Recent developments have eliminated these objections. No
German would object to building obstacles on the East
German/Polish border. Poland would certainly prefer that

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[65]Richard A. Stubbing and Richard A. Mendel, The Defense
Game: An Insider Explores the Astonishing Realities of
America's Defense Establishment (New York: Harper and Row
Publishers, 1986), 126-127, and William P. Mako, U.S. Ground
Forces and the Defense of Central Europe (Washington, D.C.:
The Brookings Institution, 1983), 92-97, are two examples.

German resources be spent on obstacles and fortifications than tanks and aircraft. Though political objections to obstacles have disappeared, military planners give obstacles little attention. They propose instead offensive doctrines that are inconsistent with the national and Alliance strategy. Clearly factors other than strategy are responsible for the recent turns in doctrine.

In summary, changes in national strategy do not account for the four revisions of FM 100-5. The most telling indicator is the change in doctrinal emphasis on Europe though Europe remains the nation's top priority. Even when doctrine appeared to change with strategy, as in 1982, there was little evidence that doctrine writers had adjusted doctrine, in anything but superficial ways, to accommodate changes in strategy. Rather, particularistic assumptions, with no clear external motivation, explain doctrinal change under strategic continuity.

Threat

War is a dynamic interaction between two or more antagonists. Success is purely relational. Whether a doctrine succeeds or fails depends on the actions and capabilities of the adversary. Doctrine is implicitly threat dependent. Logically, changes in the threat should provoke changes in doctrine.

History is rich with examples cf armies tuning their doctrines to gain an advantage over their adversaries. One of the better documented examples is Wellington's discovery of the reverse slope defense while fighting on the Iberian Peninsula.[66] Outgunned by French artillery, often outnumbered as well, Wellington learned to place his line of defense behind the crest of a ridgeline. This sheltered his forces from the French artillery and concealed the positioning of his scarce reserves. It also simplified the control of fires by preventing the premature engagement of the enemy. Wellington perfected the tactic in Spain and Portugal, then applied it decisively at Waterloo. Wellington's doctrine succeeded because it nullified French advantages and accentuated British strengths.

The history of war is also littered with examples of armies that failed to reform their doctrines in response to a changing threat. The French Army, seared by the bloodletting of the First World War, was firmly committed to an area defense in the thirties. The tank units were dispersed as local reserves. The Army throttled the Air Force, blocking the doctrinal innovation that swept the rest of Europe. The French doctrine was impervious to clear evidence that the Germans were developing a markedly

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[66] Larry H. Addington, <u>The Patterns of War Since the Eighteenth Century</u> (Bloomington, IN: Indiana University Press: 1984), 30.

159

different tactic. The Blitzkrieg rolled over the retrenched French doctrine.[67] If doctrine does not keep pace with the changes in the threat, the consequences are often grave.

The Army claimed changes in the threat required two of the four revisions of FM 100-5. The 1976 edition prescribed a greater reliance on the defense in large part because the Soviets had closed the qualitative gap while retaining their numerical superiority.[68] AirLand Battle Future assumes that the reductions programmed in the CFE treaty will eliminate the Soviet numerical advantage and lessen the density of forces to the point where nonlinear battle will be the norm.[69] A closer look reveals that changes in the threat do not explain the changes in Army doctrine well.

The Active Defense doctrine responded specifically to the Soviet threat in Europe. It did not pretend to aim at other threats. Rather, it assumed that any other threat would be less challenging. The Active Defense was a doctrinal answer to the proximity, readiness, mass, quality, and tactics of Soviet forces. These five dimensions of the Soviet threat remained fundamentally constant from 1976 to

[67]See Posen, Chapter 4 and Robert A. Doughty, "French Antitank Doctrine, 1940: The Antidote that Failed," Military Review LVI.5 (May 1976): 36-48.

[68]FM 100-5, 1976, 1-1.

[69]Foss, 20.

1989. Actually, the Soviet threat will not change substantively until the CFE treaty is implemented and Soviet forces have withdrawn from Eastern Europe.

When NATO was formed and ever since, Soviet forces outnumbered NATO forces by a considerable margin. The Soviets had a forward-deployed active force of such mass that a "bolt from the blue" attack by the Soviets was plausible in Europe. By echeloning their forces in depth, then employing "pile on" tactics, the Soviets could easily penetrate static defenses.

Two western advantages offset the many Soviet advantages in the past: NATO forces were qualitatively superior if numerically inferior and NATO conventional inferiority was backed up by a superior nuclear arsenal. When the United States refocused on Europe in the mid-seventies, however, both compensations were eroding.

While the U.S. spent a decade in the jungles of Vietnam, the Soviet Union rapidly modernized its army. NATO's qualitative advantage evaporated. "Soviet and Warsaw Pact forces gradually deployed to bases closer to the borders, implying a preemptive, non-nuclear strategy."[70] Simultaneously, the American dominance in tactical and

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[70]Herbert, 6, and Hendrickson, 153.

theater nuclear forces diminished.[71] This undercut the credibility of the nuclear deterrent.

The Active Defense offered a solution to the more ominous Soviet threat. It emphasized the defense because NATO lacked the "correlation of forces" to attack.[72] It proposed an elastic defense in depth and told commanders to trade space for time, even though NATO politics demanded a forward defense, because Soviet formations would overrun NATO forces that tried to hold ground. It placed little confidence in nuclear weapons since Soviet deployments denied the U.S. escalation dominance and neutralized the threat of first use. It focused U.S. forces on winning the first battle. Soviet forces were just across the border and ready for battle. The American tradition of losing the first battle and mobilizing to win the war was not appropriate for the modern Soviet threat. Perhaps most telling, it redefined winning as achieving favorable exchange ratios. Victory in the traditional sense was simply unattainable.

The Active Defense doctrine was clearly threat-oriented. It was criticized, however, for oversimplifying the threat. The Active Defense was designed to defeat the classic, narrow-front, massed-armor breakthrough. U.S.

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[71]Record, 33-34.

[72]Brownlee and Mullen, 192.

162

commanders were told to concentrate against the Soviet penetration by laterally shifting forces from sectors that were feeling less pressure. One year after FM 100-5 was published, the military community discovered a "tactical revolution in Soviet military doctrine."[73]

Apparently, the lethality of antitank missiles in 1973 had impressed the Soviets. They concluded that a narrow penetration was too vulnerable to antitank fires. In 1977, western analysts detected a new Soviet operational maneuver.[74] Soviet units attacked on a broad front to discover gaps in defenses. When a gap was discovered, an Operational Maneuver Group (OMG) shot through the gap and attacked deep in NATO's rear areas. The follow-on echelons exploited success. If the enemy attacked on a broad front, friendly commanders would be unable to laterally shift units to concentrate opposite the enemy's penetration. The multi-pronged Soviet attacks would fix the defending forces across the whole front. A broad front attack seemed to undermine the Active Defense.

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[73]Philip A. Karber, "The Tactical Revolution in Soviet Military Doctrine," Military Review LVII.11 (November, 1977): 83-85.

[74]Gregory Fontenot and Matthew D. Roberts, "Plugging Holes and Mending Fences," Infantry 68.3 (May-June 1978): 32-36 and Donald K. Griffin, "If the Soviets Don't Mass," Military Review LIX.2 (February 1979): 2-13.

The Active Defense was tailored to the threat, but the threat tactics changed in less than a year. While this new Soviet maneuver was used to invalidate the Active Defense doctrine, it is not clear that the AirLand Battle doctrine was adjusted to answer the new Soviet maneuver.

The AirLand Battle doctrine was supposedly designed to defeat the Soviet breakthrough maneuver or the broad front attack.[75] There are reasons to doubt, however, the AirLand Battle doctrine could contain a broad front attack by the first echelon any better than the Active Defense. Quite the contrary, AirLand Battle required the commander to accept even greater risks across his front. The commander stripped out forces for the rear battle, the deep battle, and to form a reserve. Gaps and penetrations were more likely in a unit employing AirLand Battle doctrine than in a unit employing Active Defense doctrine because the defending forces were spread more thinly. The reserves would be able to plug holes and gaps, but they would be outnumbered, divested of the advantages of prepared defenses, and over-tasked. The AirLand Battle commander paid for greater flexibility with combat power he could not spare. Neither the Active Defense nor the AirLand Battle is able to prevent penetration by the first echelon of a force so numerically

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[75]Starry, 34.

164

superior that it can attack on a broad front and still greatly outnumber the defender.

Soviet forces were arrayed in depth to execute both the narrow breakthrough attack and the broad front attack. The AirLand Battle doctrine solution to both maneuvers was to attrit and delay the second echelon while defeating the first echelon. Whether the Soviets had introduced a new maneuver or not, this would have been the prescription. The actions of the first Soviet echelon distinguished the broad front attack from the narrow breakthrough attack. The deep battle did not address the first echelon. It targeted the second echelon which was fundamentally the same in both maneuvers.

In the end, both the 1976 edition and the 1982 edition described the threat as numerically superior, armed with weapons nearly as effective as our own, and bent on penetrating our defenses. The minor change in Soviet tactics was not important enough to even be mentioned in the 1982 edition. Though the threat remained fundamentally constant, the Army chose a different solution in 1982 than in 1976.

Both doctrines told commanders they could fight outnumbered and win. The Active Defense said the key was to engage the enemy on favorable terms, exacting disproportionate losses from the enemy. AirLand Battle

165

doctrine assumed away the tyranny of numbers. It told
commanders they could fight outnumbered and win because
numbers did not matter. What mattered was seizing the
initiative. In this sense, AirLand Battle was less threat
dependent than Active Defense had been.

AirLand Battle was a global doctrine, but a Soviet
aggression in Europe remained the primary scenario. No
special analysis of threats, Soviet or other, outside Europe
was evident in the 1982 edition or the journal articles that
announced the edition.

The Army of Excellence (AOE) restructuring in 1983
provided more compelling evidence that the Army was taking a
global perspective. AOE, however, was not attuned to the
threat. AOE lightened the contingency forces and increased
the number of light divisions though the global threat
(Soviet outside Europe and Third World) was increasingly
heavy. The evolution of the threat does not explain the AOE
restructuring.

When the Army introduced the deep battle in 1982, a
number of observers noted the convergence of American and
Soviet doctrine. Indeed, Soviet deep operation theory is
similar to AirLand Battle doctrine's deep operations. Both
prescribe attacking the enemy through his full depth.

Some pondered whether this was a collective version
of the Stockholm syndrome -- the U.S. Army after years of

studying the Soviets had come to respect their doctrine. Others argued that the coincidence in the doctrines of the two superpowers somehow proved the correctness of the doctrinal prescriptions.

Those that defend American doctrine by underlining the similarities with the Soviet doctrine often neglect the particularistic ends and means of Soviet strategy. The Soviets had an offensive strategy that could only be pursued by offensive doctrine. The Soviets enjoyed vast numerical superiority. They could accept the disproportionate losses accrued by offensive maneuver. They had surplus forces to commit to deep operations. The U.S. has very different goals and capabilities. That our doctrine is similar to the Soviet doctrine does not guarantee that our doctrine is appropriate to our national purposes and means.

The Soviet threat began to change dramatically in 1989. All five dimensions of the threat -- proximity, readiness, mass, quality, and tactics -- will be transformed by the mid-nineties.

The Soviet Union has agreed to withdraw its troops from Czechoslovakia and Hungary this year, and from the former East Germany by 1994. Poland is negotiating the withdrawal of Soviet forces as well. By 1994, a wide buffer zone may separate NATO and Soviet forces.

The dramatic changes in Soviet society and the military in particular have drastically reduced the readiness of the Soviet military. In January 1990, the National Intelligence Estimate concluded that the warning time for a Soviet attack had more than doubled. In February, an even longer warning time was announced.[76] A Soviet "bolt from the blue" is no longer feasible.

The CFE treaty will replace Soviet superiority with inferiority. The Warsaw Pact and NATO will be held to equal ceilings, which require drastically asymmetric reductions by the Soviet Union. While NATO stands firm, the Warsaw Pact has dissolved. If the CFE treaty is implemented, NATO should enjoy a 25 percent numerical advantage over the Soviet Union.[77]

Domestic economic pressures have forced the Soviet Union to drastically reduce its military expenditures. The production rates of military materiel has already fallen off. Modernization will not keep pace while the economy crumbles.

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[76]Benjamin F. Schemmer, "Warning Time," Armed Forces Journal International 127 (January 1990): 5.

[77]The sufficiency rule prevents the Soviet Union from having more than 80 percent of the Warsaw Pact forces. 100/80=1.25.

Finally, the Soviets have announced a new doctrine of defensive sufficiency.[78] They have gone to great lengths to reduce the offensive content of their doctrine. It would be hard to imagine a more dramatic change in the Soviet threat.

Our image of the future battlefield, however, has remained fairly constant since the early eighties. In 1982, the Army predicted that highly lethal enemy fires and "massive troop concentrations" would result in nonlinear maneuver battles.[79] In the early nineties, the Army predicts that substantially reduced force densities will result in nonlinear maneuver battles. An objective observer could not avoid being suspicious. Though the Army attributes this doctrinal change to the threat, over time, doctrine seems to stay constant while the threat changes dramatically. The choice of a nonlinear maneuver doctrine appears to be threat independent.

The CFE treaty will not require NATO to substantially reduce its forces. NATO agreed to reduce no category of weapons by more than 15 percent specifically to insure that the post-CFE force-to-space ratio would still

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[78]Manfred R. Hamm and Hartmut Pohlman, "The Military Strategy and Doctrine: Why They Matter to Conventional Arms Control," The Washington Quarterly 13.1 (Winter 1990): 186.

[79]FM 100-5, 1982, 1-2.

allow a forward defense.[80]   If NATO could assure a linear

defense against a Soviet threat that enjoyed vast numerical

superiority, it can surely now hold the line against

drastically fewer forces.

The assumption that the CFE treaty leaves critical

gaps in NATO defenses is specious.   This is especially true

as NATO fields sophisticated long range sensors like JSTARS.

If JSTARS lives up to its advance billing, there will be no

gaps in the electronic coverage of the battlefield.

It is also far from clear that we will face in war

what is deployed in Europe in peacetime.   The peacetime

forces will likely be greatly thickened as war becomes

imminent.   We will not fight in Europe with low force

densities unless the Soviets attack from peacetime

dispositions.   A "bolt from the blue" attack by an inferior

force has little chance of winning.   That scenario was

plausible in the past because the Soviets had forces forward

deployed and ready for war, forces that greatly outnumbered

NATO's defending forces.   It is not clear why the "bolt from

the blue" scenario has survived the drastic change in the

threat.

The CFE treaty buys NATO warning time.   If the

Soviets wanted to win a war in Europe, they would have to

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[80]Klaus Wittmann, "Challenges of Conventional Arms
Control," Adelphi Papers 239 (Summer 1989): Chapters 4 and
5.

mobilize their forces and deploy them forward, possibly even fight their way through Poland. NATO would have ample time to mobilize and deploy its forces. By the time the war began, Europe would be as densely packed with forces as it was before 1989. An objective analysis of the threat does not explain the emphasis on nonlinearity in the next edition of FM 100-5.

In summary, the 1976 edition of FM 100-5 was caused in part by the unfavorable evolution of the Soviet threat. The 1982 edition described a nearly identical threat but proposed a substantially different doctrine. The 1982 edition argued that threat capabilities and doctrine would break the next battlefield into nonlinear maneuver battles. AirLand Battle Future will face a radically changed Soviet threat, but it will also argue that the next battlefield will be nonlinear. Changes in the threat partially explain doctrinal innovation in 1976. Doctrinal innovation since 1982 cannot be attributed to change in the threat.

Failure in War

The military may dislike change and resist innovation, but it cannot suffer defeat. Failure in war compels the military to reform. Timothy Lupfer, a student of doctrinal reform in the Twentieth Century, observed:

Many significant military reforms have only been possible in the wake of irrefutable evidence of the need for reform; unfortunately, such evidence often occurs in the form of a military disaster.[81]

William S. Lind, a leading member of the Defense Reform Movement in the early eighties, reached the same conclusion:

> Reform without defeat is the exception, not the rule. Most great military reforms, like the Scharnhorst reforms in Prussia, have only been possible after a military disaster destroyed the credibility of the "business as usual" defense establishment.[82]

Both authors argue that we should expect innovation in the aftermath of defeat. Losers innovate.

History provides numerous examples of significant reform on the heels of defeat. The Scharnhorst reforms in Prussia, cited by Lind, are an excellent example.[83] Prussia, like many other European nations, was unwilling to mobilize the nation as Napoleon had. Frederick-William I: I wanted to preserve royal prerogatives and the military privileges of the Junkers. The defeat at Jena in 1806

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[81]Timothy T. Lupfer, "The Challenge of Military Reform," in The Defense Reform Debate: Issues and Analysis, eds. Asa A. Clark IV and others (Baltimore, MD: The Johns Hopkins University Press, 1984), 25.

[82]William S. Lind, "Defense Reform: A Reappraisal," in The Defense Reform Debate: Issues and Analysis, eds. Asa A. Clark IV and others (Baltimore, MD: The Johns Hopkins University Press, 1984), 333.

[83]See Addington, 34 and 48-49. See also Hajo Holborn, "The Prusso-German School: Moltke and the Rise of the General Staff," in Makers of Modern Strategy from Machiavelli to the Nuclear Age, ed. Peter Paret (Princeton, NJ: Princeton University Press, 1986), 281-284.

allowed reformers to overcome traditional opposition to reform in the Prussian society. In the decades that followed, Gerhard von Scharnhorst and his disciples transformed the Prussian military. The Prussian Army became a Nation-in-Arms, and the renowned Prussian general staff system was established. As a direct result of these reforms, the Prussian Army emerged in the 1860s as the most powerful force on the European Continent.

A defeated army rationally reforms itself. Failure on the battlefield is far more painful than reform in peacetime. Once failure on the battlefield makes it clear that current doctrine, organization, or equipment will not secure victory on the battlefield, the army will become an advocate of reform.

Logically, if defeat precipitates the reform, then the reform should be aimed at rectifying the shortcomings that caused the defeat of the army. If reform follows defeat but does not address the shortcomings revealed by that defeat, we cannot assert that defeat caused the reform.

Failure in war would seem to be a plausible explanation for reform in the seventies and eighties. As the recent period of doctrinal reform opened, the United States suffered an unprecedented setback in Vietnam. Many analysts blamed the defeat on our weak counterinsurgency

doctrine.[84] The Active Defense, however, offered little advice on how to win future Vietnams. Rather, the 1976 edition of FM 100-5 turned its back on counterinsurgency warfare. Indeed, counterinsurgency doctrine stagnated for a decade after the Vietnam war. The doctrinal reform in 1976 came on the heels of an American defeat in Vietnam, but the Active Defense doctrine seemed to deny the relevance of the war in Vietnam.

Arguably, the Army did not recognize Vietnam as a defeat. Few military officers admitted that the United States had been beaten militarily in Vietnam, especially in the mid-seventies. The Army was far more likely to point out that the United States had won every battle and attribute the failure to factors beyond the purview of the Army. Vietnam did not confront the military with undeniable evidence of the inadequacy of their doctrine and, therefore, was probably not the impetus for reform inside the Army.

A different war, the 1973 Arab-Israeli war, captured the attention of the authors of the 1976 edition. At the outset of this war, Israel was caught unprepared when the Egyptians introduced large quantities of antitank missiles and an air defense umbrella. The Active Defense doctrine is filled with lessons drawn from the Israeli experience in this war -- the value of suppressive fires, the lethality of

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[84] Bowman, 177-180.

modern weapons, the short duration of modern wars. The authors of the 1976 edition learned vicariously from the Israeli experience. They introduced significant doctrinal changes reflecting the lessons of a war the United States did not fight, and that the client of the United States did not lose. This may explain in part why the Active Defense doctrine never enjoyed the widespread support of the U.S. Army.

Though untested by war, the Army abandoned the Active Defense in 1982. It had never failed in war, indeed it had never been employed in combat. Nonetheless, the Army radically reformed its doctrine.

Some analysts also attributed the reforms in the early eighties, including the 1982 edition of FM 100-5, to the failure in Vietnam. They argued that the botched Iranian rescue attempt was the final straw, triggering reforms that had been necessary since the defeat in Vietnam.[85] The 1982 edition of FM 100-5, however, offered little more guidance on how to win in such diverse circumstances than the Active Defense doctrine had. On the contrary, the AirLand Battle doctrine offered an alternative

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[85]Jeffrey S. McKitrick and Peter W. Chiarelli, "Defense Reform: An Appraisal," in The Defense Reform Debate: Issues and Analysis, eds. Asa A. Clark IV and others (Baltimore, MD: The Johns Hopkins University Press, 1984), 310-311.

solution to the defense of Central Europe. The incentives for reform in 1982 had little to do with failure in war.

The next edition of FM 100-5 will introduce reforms to AirLand Battle doctrine though the Army has just experienced a remarkable success in a major conventional conflict. AirLand Battle doctrine inspired the operational and tactical design of Operation Desert Storm. Civilian and military leaders cite doctrine as one of the keys to this success. Though many believe Operation Desert Storm validated AirLand Battle doctrine, efforts to revise the doctrine continue apace.

Failure in war, therefore, was not a proximate cause of the doctrinal reform in the seventies and eighties. There is evidence, however, that the apparent failures of the military in these two decades, often in ways that had little to do with doctrine, invited wider civilian participation in the formulation of defense policy which encouraged doctrinal reform while not always determining the direction the reform would take.

The defeat in Vietnam shattered the credibility of the military. It convinced many Congressional leaders and academic elites that defense policy could not be left to the

military. Henry Kissinger described the era as "an anti-military orgy."[86]

A series of setbacks, mistakes, and accidents sustained civilian activism in military policymaking: Desert One, the air raid in Lebanon followed by the bombing of the Marine barracks, interservice squabbling during operations in Grenada, the failure of the defenses of the USS Stark and the downing of an Iranian airliner during the reflagging operations in the Persian Gulf were some of the more prominent examples. Each setback reduced the confidence civilian leaders placed in military judgement.

During two decades of skepticism, civilian leaders encouraged reform indirectly by exerting their control over resources and military leadership. No longer confident of the military's competence, they also became directly involved in the reform of doctrine and proposed specific doctrinal changes.

In 1974, Congress enacted the Budget and Impoundment Control Act. This greatly increased Congress' ability to intervene in defense policymaking. It established House and Senate Budget Committees that could place a ceiling on the share of the budget allocated to defense. It authorized the committees a larger staff. It created the Congressional

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[86]Henry Kissinger, The White House Years (Boston: Little, Brown, 1979), 215.

Budget Office (CBO), which provided Congress an in-house

policy analysis capability. These changes reduced the

Congressional dependence upon military analysis and shifted

the balance between Congress and the Executive in military

policymaking. The act presaged a new activism by Congress

in defense matters.

> The net result throughout the early 1970s was a
> pattern of defense budget cutting by Congress that,
> while the amounts were not large (generally under 5
> percent), did reverse the earlier tendency to rubber
> stamp, or even increase, the Pentagon's budget
> requests.[87]

Congress also showed a greater willingness to exercise its

traditional powers. The Army felt the sting of the new

Congressional assertiveness when Congress cancelled the

Cheyenne attack helicopter and MBT-70 main battle tank.

The Active Defense doctrine was written in this

hostile legislative context. Congress was clearly unwilling

in the early seventies to defer to military judgment. The

Army needed a doctrine that would stand up to Congressional

scrutiny, that could be validated scientifically, without

relying as heavily as previous doctrines on military

judgement. Herbert explained:

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[87]James W. Reed, "Congress and the Politics of Defense Reform," in The Defense Reform Debate: Issues and Analysis, eds. Asa A. Clark IV and others (Baltimore, MD: The Johns Hopkins University Press, 1984), 240.

> As TRADOC Commander, DePuy was determined to provide
> the Army with better arguments with which to defend
> its budget and especially that part of the budget
> earmarked for investment in new weapons. He
> proposed to demonstrate the Army's need for each
> budget item by explaining its role in an overarching
> concept of how the Army would fight. He then
> applied rigorous cost-effectiveness analyses within
> standard scenarios to demonstrate that each item was
> the optimum balance of costs and capabilities. . . .
> This required modeling, expression of variables as
> numbers, and other routines of operations
> research.[88]

This explains, in part, why the Active Defense doctrine derived from attrition theory. Attrition can be simply modeled with Lanchester equations.[89] The human dimensions of war that figure so prominently in maneuver theory and AirLand Battle doctrine, however, are not easily reduced to numerical analysis. The need for a doctrine that could be quantified pushed TRADOC toward a doctrine founded on attrition theory. The prominence of force ratios in the Active Defense doctrine and its weapon system orientation reflected the attrition models that inspired the doctrine.

The declining influence of military judgement on Capitol Hill pushed doctrine toward systems analysis and numerical methods. The authors of the Active Defense doctrine hoped that if military judgment was no longer persuasive, perhaps computer models would be.

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[88]Herbert, 100.

[89]For an introduction to attrition modeling, see Robert P. Haffa, Jr., Rational Methods, Prudent Choices: Planning U.S. Forces (Washington, D.C.: National Defense University Press, 1988), 47-52.

Defeat in Vietnam, therefore, provoked change in doctrine in a very indirect manner. It undercut Congressional confidence in military judgement which undermined Army acquisition plans. This prompted Army leaders to design a more persuasive doctrine, a doctrine less dependent on military judgement, to protect future acquisition plans.

A lack of civilian confidence in the military continued into the eighties. The ghost of failure haunted the military. Desert One was its most recent incarnation. The tension between military leadership and civilian control was aggravated in the early years of the Reagan presidency.

> By boosting defense spending during a severe recession while cutting the budget back in other areas, the administration not only put the defense establishment on the skyline, it intentionally insisted it wear a black hat. . . . The sight of Pentagon officials joining weapons contractors in a budgetary feeding frenzy while unemployment lines lengthen . . . caused politicians, press, and the public to give the reformers a hearing.[90]

The 1982 edition of FM 100-5 was cast during an era of uncommon civilian participation in the formulation of defense policy. The civilian reformers sought to influence doctrine by changing the Army's leadership and proposing specific doctrinal reforms, rather than shaving slices off the Army's budget.

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[90]Lind, 328.

In 1979, during the Carter administration, Secretary of Defense Harold Brown led the charge by unexpectedly appointing General Edward "Shy" Meyer as the new Army Chief of Staff "over the objections of the Army hierarchy."[91] Meyer brought to the post a reformer's enthusiasm. The 1982 edition reflected his belief that human factors were often decisive in war and that the Army's doctrine should be applicable worldwide and less defensive in tone. By appointing GEN Meyer as Chief of Staff, civilian leaders shaped doctrine in 1982.

In the late seventies a military reform movement emerged. It began as a loose collection of individuals having little in common other than their desire to reform defense policy. The names of the original members are very familiar: John Boyd, Steven Canby, Jeffrey Record, Edward Luttwak, William Lind, Norman Polmar, Pierre Sprey, and James Fallows are the most prominent. In 1981, Senator Gary Hart brought national attention to many of the reform movement's ideas by a series of articles and personal endorsements. In that same year, the bipartisan Congressional Military Reform Caucus was formed. In a few years its membership had grown to include more than fifty senators and congressmen.

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[91]Stubbing, 128.

This military reform movement advanced many themes that are evident in the 1982 edition of FM 100-5.[92] For example, the AirLand Battle doctrine shared Lind's fascination with maneuver theory. The AirLand Battle tenet "agility" told leaders to operate inside their adversary's decisionmaking cycle, a concept that paralleled Boyd's theory. The movement's general emphasis on leadership and the human factors in war and their preference for historical methods coincided with the reintroduction of these themes in the 1982 edition of FM 100-5.

It is not clear, however, that the military reform movement actually shaped the 1982 edition of FM 100-5. Many of the ideas that are common to FM 100-5 and the military reform movement have roots that run deep in the American military tradition. The 1941 edition of FM 100-5, for example, exhibited a comparable maneuver bias. We know that GEN Starry directed the authors of the 1982 edition to review the 1941 edition of FM 100-5.[93] There is no evidence that they reviewed the platform of the military reform movement. The 1982 edition of FM 100-5 was circulated in draft form only two months after the Wall Street Journal

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[92]For a review of the key themes of the military reform movement, see John M. Oseth, "An Overview of the Defense Reform Debate," in The Defense Reform Debate: Issues and Analysis, eds. Asa A. Clark IV and others (Baltimore, MD: The Johns Hopkins University Press, 1984), 44-61.

[93]Romjue, 43.

published Senator Hart's articles presenting the platform of the reform movement[94] and long before the Congressional Military Reform Caucus was operating. There is no evidence that the Army altered the 1982 edition to incorporate any element of the military reform movement's platform.

While the 1982 edition shares many themes with the platform of the military reform movement, on a number of points the two diverge. For example, the military reform movement recommended that the military acquire larger numbers of less sophisticated and cheaper weapons. It warned against the increasing reliance on a smaller number of highly sophisticated and expensive weapons. The Army 86 acquisition program clearly did not heed this prescription. The military reform movement was skeptical about emerging technologies. The deep battle concept in the 1982 edition was very optimistic. Evidently, the Army, and not the military reform movement, determined the content of the 1982 edition. The parallelism was serendipitous.

While the military reform movement may not have caused doctrinal reform in the Army in 1982, it may have made the implementation of the reform easier. Insiders who advocated reform now had allies outside the Army's hierarchy that could promote their ideas. Army leaders no doubt

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[94]Senator Gary Hart, "The Case for Military Reform," The Wall Street Journal, 23 January 1981, 1.

recognized the value of endorsing in the new doctrine themes
that were popular in Congress.

Military operations in Grenada in 1983 revealed that
the military services were not cooperating in planning and
executing contingency operations. Congress, spurred by the
irrefutable evidence from Grenada, enacted the Goldwater-
Nichols Act in 1986 in an attempt to legislate cooperation
between the services. The 1986 edition of FM 100-5 arguably
incorporated some of the lessons from the operation in
Grenada. Its efforts to more clearly define the division of
responsibilities between the Air Force and the Army
reflected a growing tendency in the mid-eighties to admit
that future military operations would require the
cooperation of all three services. It coincided with
Congressional concern that the services were not pulling
together.

The Army is now modifying doctrine to include key
concepts of AirLand Battle Future though there is little
external criticism of the current doctrine. The recent
success of Operation Desert Storm should contribute to
Congressional and public confidence in the military and
reduce civilian involvement in doctrinal reform. The on-
going revision of FM 100-5 cannot be explained by failure in
war or external criticism resulting from failure in war.

In summary, though historically the greatest reforms have followed military defeats, there is little evidence that failure in war was a direct cause for any of the four revisions of FM 100-5 in the last two decades. Vietnam, however, damaged civilian confidence in the military and unleashed a spate of Congressional activism that was reflected in the 1976 edition of FM 100-5. The Congressional activism reached its zenith in the early eighties, but the Congressional Military Reform Caucus sought reforms that largely paralleled those already in progress inside the Army. The on-going revision of FM 100-5 cannot be attributed to either failure in war or civilian calls for reform.

Resources

The national strategy determines the ends of military policy, but the means required to implement the strategy and to achieve the ends often lag behind. The Army must tailor its doctrine to reconcile means and ends. As resources change, we should expect to see changes in the doctrine.

Asa Clark advanced the hypothesis that reductions in resource levels provoke doctrinal innovation.[95] There is

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[95]Asa A. Clark IV, "Interservice Rivalry and Military Reform," in The Defense Reform Debate: Issues and Analysis, eds. Asa A. Clark IV and others (Baltimore, MD: The Johns Hopkins University Press, 1984), 258.

ample evidence that the 1976 edition of FM 100-5 was caused

by absolute reductions in the Army's resources.

In the years after Vietnam, the budget of the

Department of Defense declined precipitously.

> In fiscal 1964 the U.S. defense budget, measured in
> terms of outlays in constant 1983 dollars, amounted
> to $181.6 billion; by fiscal 1976 the budget had
> bottomed out to $155.1 billion.[96]

Since 1952, defense outlays had never been so low.[97] Each

year from 1972 to 1976, the Army averaged an 8.5 percent

real decline in total obligation authority (TOA).[98] The

Army's share of the defense budget fell from 32.1 percent in

1970 to 24.6 percent in 1975.[99]

The Army suffered equally significant reductions in

manpower and force structure after Vietnam. "The Army

declined from a pre-Vietnam strength of 973,000 men and

sixteen divisions to a force of 759,000 men and thirteen

divisions."[100]

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[96]Record, 31.

[97]William W. Kaufmann, A Reasonable Defense (Washington,
D.C.: The Brookings Institution, 1986), 32.

[98]Thomas Byrne, ed., Transition to the Army of the
1990s, The FY 1991 Army Budget (Arlington, VA: Association
of the United States Army, 3 May 1990), 14. The annual cuts
were: FY 72, -9%; FY 73, -10.6%; FY 74, -7.4%; FY 75, -7.2%.

[99]Clark, 262.

[100]Record, 30.

The Active Defense doctrine reflected these reductions in the Army's resources. GEN DePuy justified the defensive tone of the 1976 edition by emphasizing the limited capabilities of the Army in the seventies. He claimed he would have preferred an offensive doctrine, but the "correlation of forces" in Europe, worsened by Soviet modernization and U.S. retrenchment, would only support a defensive doctrine.[101]

While the national strategy tasked the Army with fighting 1 and 1/2 wars, the budget only financed 1 war.[102] In 1972, the U.S. Strike Command, which coordinated military intervention, was disbanded.[103] In 1977, the Carter administration proposed the withdrawal of American ground forces from South Korea. Simultaneously, the Carter administration launched a number of initiatives aimed at bolstering NATO defenses. In 1978, as part of the NATO Long-Term Defense Plan, the United States extended its most resource intensive commitment by agreeing to have ten divisions in Europe within ten days of mobilization. The Carter administration was leading a 1 war strategy; it invested all its scarce defense resources in Europe.

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[101]Cited in Brownlee and Mullen, 182.

[102]Record, 32-33.

[103]William P. Mako, U.S. Ground Forces and the Defense of Central Europe (Washington, D.C.: The Brookings Institution, 1983), 26.

The Eurocentric focus of the Active Defense doctrine merely reflected the resource constraints and the spending priorities of the seventies. The European bias of the 1976 edition proved an effective bureaucratic tactic. "The resurgence of interest in NATO resulted in the addition of three divisions and two brigades to the Army force structure during 1975 and 1976."[104] Starting in 1976, the Army budget enjoyed modest real increases in TOA. The Active Defense provided an overarching concept for the modernization of the Army's heavy forces in Europe, the only acquisition that would have been consistent with the Carter administration's strategy. The modest increase in the late seventies launched the M1 main battle tank, M2 and M3 Bradley fighting vehicles, AH-64 Apache attack helicopters, and MLRS programs. The Active Defense doctrine's European focus was as important as its quantitative approach (discussed earlier) in advancing this heavy force modernization within the executive branch and before Congress.

The assumption, in the 1976 edition, that the next war would be a short war reflected the declining levels of war stocks. During the McNamara years, the Army strove to maintain six months of war reserve stocks. The Nixon administration scaled back the requirements for war stocks to ninety days. The Carter administration reduced the

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[104]Mako, 25.

requirements still further to thirty days.[105] The Active

Defense doctrine merely reflected the declining willingness

of the Nixon, Ford, and, subsequently, Carter

administrations to provision forces for a long war.

Perhaps more importantly, the Army transitioned to

an all-volunteer force in 1973. As the 1976 edition of FM

100-5 was written, the impact of this transition was

difficult to foresee. Large portions of the officer corps

worried that an all-volunteer force would be significantly

less qualified than the soldiers of a draft Army. By the

late seventies, this prediction seemed correct. "Recruits

in the lowest classifications employed in army intelligence

test (categories 4 and 5) made up 44 percent of the

accessions in 1979, ..."[106] The elimination of the GI

bill, in 1976, and the real decline in pay caused a dramatic

reduction in the caliber of recruits.[107]

The Active Defense doctrine placed little confidence

in the individual soldier. It called for centralized

control, stressed technical proficiency, and told soldiers

specifically how to fight. It expected less low-level

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[105]Hendrickson, 153.

[106]Hendrickson, 154.

[107]Asa A. Clark IV and Thomas W. Fagan, "Trends in
Defense Budgeting: Mortgaging the Future," in The Defense
Reform Debate: Issues and Analysis, eds. Asa A. Clark IV and
others (Baltimore, MD: The Johns Hopkins University Press,
1984), 223.

initiative, and valued it less, than any doctrine before or since. The 1976 edition was written for an Army composed of less talented recruits.[108]

The Soviet invasion of Afghanistan and the fall of the Shah of Iran spurred defense spending in the final years of the Carter administration. It also brought to office a new administration with a mandate to revitalize America's military.

The Reagan administration dramatically increased the resources available to the Department of Defense (DOD) and the Army. DOD outlays more than doubled from 1980 to 1986.[109] During President Reagan's first term, FY 1982 to FY 1985, the military absorbed a 43.1 percent increase in TOA.[110] The Army enjoyed a 19.4 percent increase in TOA from FY 1981 to FY 1983.[111] The requirement for war stocks was raised from thirty to ninety days.[112] The Reagan administration pushed hefty pay increases and benefits

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[108]Herbert, 16, argues GEN DePuy "was not impressed by the initiative and aggressiveness of American soldiers." He believed they required specific instructions and constant, personal supervision. See also DePuy's advice to the authors of the 1976 edition to keep the message simple so that soldiers could understand it, cited in Herbert, 86.

[109]Hendrickson, 155.

[110]Kaufmann, 24.

[111]Clark, "Interservice," 261.

[112]Hendrickson, 155-156.

packages through Congress.[113] As a result, the quality and morale of incoming recruits increased dramatically in the first half of the eighties.

We expect doctrinal innovation when resources decline. The 1982 edition of FM 100-5, however, introduced revolutionary changes in doctrine while the Army's resources were expanding. The first term of the Reagan administration was a time of plenty for the Army. Hidebound military bureaucracies should not innovate qualitatively when they experience a windfall in resources. We expect them to procure and consume in greater quantities but to carry on in traditional ways. There appear to be two explanations for the Army's doctrinal innovation in the early eighties.

First, the innovation might have been inspired by factors other than the change in resources. The Active Defense doctrine was imposed on the Army by a drastic reduction in resources. As the lean Ford and Carter years gave way to the fat Reagan years, the Army was able to return to a doctrine more in line with its organizational preferences. The causal factor for innovation in the early eighties, according to this theory, is organizational preference. The relaxation of constraints on resources was merely the permissive condition that allowed the Army to heed those organizational preferences.

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[113]Hendrickson, 155.

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Second, the innovation might represent the Army's reaction to its declining budget share, though its absolute budget was increasing. Asa Clark attributes doctrinal innovation by the Army in the early eighties to its concern with preserving its piece of the pie.[114] Morton Halperin observed similarly motivated innovation in the fifties. He concluded, "The services individually prefer the certainty of a particular share of the budget to an unknown situation in which budgets may increase but shares may change."[115] Arnold Kanter agreed that services defend budget shares, even during periods of budget growth.[116] He predicted that each military service would recommend policies which increase its role at the expense of the others and that efforts by each service to defend its budget share would spill over into interservice rivalry over roles and missions. The Army's behavior in the early eighties is consistent with Kanter's predictions.

There are a number of ways to show that the Army's piece of the pie was declining in the early eighties. The Army enjoyed a 19.4 percent increase in TOA from FY 1981 to

[114]Clark, "Interservice," 261-262.

[115]Morton H. Halperin, Bureaucratic Politics and Foreign Policy (Washington, D.C.: The Brookings Institution, 1974), 58.

[116]Arnold Kanter, Defense Politics: A Budgetary Perspective (Chicago: The University of Chicago Press, 1979). 28-29.

FY 1982; the Navy, 24.4 percent; the Air Force, 26.2

percent. From FY 1981 to FY 1983, spending on general

purpose forces, which primarily benefits the Army, rose 6

percent; spending on strategic forces, which rewards the

Navy and Air Force, climbed 21 percent.[117] Finally,

procurement, which disproportionately favored the Navy and

Air Force, grew from 27 percent of the defense budget in

1981 to 39 percent in 1987. Meanwhile, operations and

maintenance, which the Army values most dearly, fell from 33

percent of the defense budget in 1981 to only 25 percent in

1987.[118] The Navy and the Air Force benefitted more from

the Reagan build up than the Army did.

The 1982 edition of FM 100-5 contained two elements

that represent an effort by the Army to defend its piece of

the pie.[119] First, its emphasis on the deep battle provided

a conceptual justification for carving out a larger share of

procurement monies and challenged the Air Force's title to

air interdiction and close air support. If the Army could

steal away a piece of the Air Force missions, it might be

able to capture the related slices of the budget.

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[117]Clark, "Interservice," 264.

[118]Lind, 328.

[119]Both elements and the interservice motives for
introducing them were highlighted by Stubbing, 129

Second, though the developmental studies had all focused almost exclusively on the battle in Central Europe, the 1982 edition asserted the worldwide relevance of AirLand Battle doctrine. Just as the deep battle sought to win a mission away from the Air Force, the globalization of Army doctrine in 1982 was aimed at winning missions away from the Marines.

Throughout the eighties the Army wrestled with the Marines for the lead on contingency operations. The Carter doctrine generated a new requirement for a Rapid Deployment Force (RDF). Both the Marines and the Army recognized the opportunity. The Marines secured an early advantage when a Marine general was named the first commander of the RDF. Richard Stubbing believes this prodded the Army to innovate:

> The Army responded immediately with talk of lighter, more mobile forces, culminating in the new "light" divisions included in the 1985 budget which will compete with Marine forces for combat missions outside Europe.[120]

By lightening the Army and increasing its deployability, the Army of Excellence bolstered the Army's claim to contingency operations.

The rivalry with the Marines over contingency operations persists today. The most recent volley was fired in the summer of 1989 when the Marines shifted focus from amphibious operations specifically to small wars

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[120]Stubbing, 129.

generally.[121] Renaming "amphibious" units "expeditionary"
units, General Alfred Gray, the Commandant of the Marines
Corps, challenged the Army for light division monies. In
testimony before the House Armed Services Committee, GEN
Gray questioned the Army's preparedness for contingency
operations, pointing out that the Army still lacked a
doctrine for the employment of light and heavy forces. The
aggressive tactic of the Marines fanned the traditional
rivalry into full flame.[122]

The Army reacted quickly, revealing its heightened
sensitivity. The Chief of Staff of the Army directed TRADOC
to write a field manual on heavy-light operations. The
manual will be published this fall. Other manuals were
revised to include a section or an appendix on heavy-light
operations.[123] Light forces joined heavy forces in
exercises at the National Training Center (NTC) and
practical exercises involving light and heavy forces were
added to the Command and General Staff College curriculum.

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[121] "Deployment May Reignite Army-Marine Feud," Army
Times, 10 September 1990, 26.

[122] "Low-Intensity Skirmish Opens in 1990 Roles-and-
Missions War," Armed Forces Journal International 127 (April
1990): 14, and "An Exclusive AFJI Interview with GEN John W.
Foss, USA, Commanding General, U.S. Army Training and
Doctrine Command," Armed Forces Journal International 127
(March 1990): 64-65.

[123] See for example, U.S. Army, FM 71-100, Division
Operations (Washington, D.C.: Headquarters Department of the
Army, 16 June 1990), Appendix A.

Interservice rivalry provides a plausible explanation for doctrinal and force structure innovation in the eighties.

Both explanations of the doctrinal innovation evident in the 1982 edition of FM 100-5 -- that it represented a return to doctrinal themes the Army prefers and that it represented a parochial defense of the Army's budget share -- stretch the bounds of systemic analysis. The first explanation refers us to the organizational preferences of the Army which are internally determined. The second explanation changes the meaning of rational behavior. Heretofore, this analysis has assumed the Army acted rationally to advance national interests. When the Army responds to interservice rivalry it defends parochial Army interests which may or may not coincide with national interests. Interservice rivalry is external, but it is not exculpatory. The key to understanding the Army's parochial behavior is a firm grasp of the Army's particular organizational interests. Both explanations lead us to a unit-level analysis that considers internal factors. Before going on to the internal variables, however, we must complete our analysis of the relationship between changes in resources and doctrine.

The Reagan build up began to peak in 1984. The budget denied any pay raise that year.[124] In 1986, and

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[124]Lind, 328.

every year since, the Army experienced a real decline in TOA.[125] The amplitude of the reductions never matched the downturns of the seventies or the upswings of the early eighties. Furthermore, the Army's budget share remained relatively constant over the last half of the eighties.[126] The moderation of the 1986 edition of FM 100-5 is what we would expect from a large, bureaucratic organization facing a marginally negative trend in resource allocation.

The revolutionary changes in Europe unleashed in 1989 menace the Army in two ways. First of all, the declining threat has undercut the American public's willingness to sustain high levels of defense spending, particularly with the budget deficit growing ominously. The current FY 1990-1994 program projects a two percent real decline each year.[127] Secondly, the changes specifically undercut the Army's traditional mission of sustained land combat. The declining likelihood of war in Europe makes the Army more susceptible to bearing a disproportionate share of any reductions.

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[125]Byrne, 14.

[126]Dick Cheney, Annual Report to the President and the Congress (Washington, D.C.: U.S. Government Printing Office, January 1990), 70. The Army's budget share increase gradually from 24.5 percent in 1984 to 25.7 percent in 1991.

[127]Byrne, 2.

The 1976 edition of FM 100-5 was drafted during a period of absolute reductions in the Army's budget. The 1982 edition was drafted as the Army's absolute budget expanded, but its budget share contracted. The next edition of FM 100-5 is being drafted while the Army's budget shrinks both in absolute terms and relative to the budget of other services.

The incentives for doctrinal innovation in the early nineties are compelling. We would expect interservice rivalry to propel the Army toward doctrine that requires technological modernization and supports contingency operations. Both are prominent in AirLand Battle Future.

We would also predict that the expectation of an absolute decline in budget would push the Army toward objectively verifiable methods and cost-effective prescriptions. In the mid-seventies, the absolute decline in resources led the Army to ground its doctrine in attrition theory and to emphasize the strength of the defense. Neither tendency is evident in AirLand Battle Future. Rather, AirLand Battle Future projects a resource intensive nonlinear battle that will require broad-based modernization. The Active Defense prescribed doctrine under a budget constraint; AirLand Battle Future describes a concept that is unconstrained by the budget. Apparently, the influence of factors other than the decline in resources

explains the variance in the Army's response in 1976 and 1991.

In summary, an absolute decline in resources explains some of the revolutionary aspects of the 1976 edition of FM 100-5: its reliance on attrition theory and its defensive bias. An absolute increase in resources permitted a return to preferred doctrinal themes in 1982. A relative decline in budget share explains some of the innovative elements of the 1982 edition: the deep battle and the globalization of a doctrine designed for Europe. The moderate downturn in the Army's budget in the mid-eighties had no clear effect on Army doctrine. Finally, AirLand Battle Future positions the Army for the interservice struggle that looms ahead, but seems to deny the absolute decline in resources that began in 1986 but deepened in 1990.

Summary

Five external variables -- technology, strategy, threat, direct civilian intervention (often as a result of failure in war), and resources -- are the traditional factors the Army cites to explain changes in its doctrine. These variables are exculpatory. If doctrinal change is caused by these external factors, then the Army is not directly responsible when doctrine fails. By arguing that a doctrinal reform results from external factors, the Army

makes doctrinal change seem objectively necessary. It allows the Army to preempt charges of parochialism if the doctrinal reform coincidentally serves the Army's interests.

External factors, however, poorly explain three of the four turn points studied in this thesis. Only the introduction of the Active Defense correlates well with changes in these external factors.

Many of the unique elements of Active Defense doctrine were evoked by changes in the environment. The 1976 edition of FM 100-5 correlated with the widespread fielding of antitank and air defense missile technology. This explained, in part, the defensive orientation of the manual, its firepower bias, and its emphasis on suppression of enemy fires.

The Soviet threat grew much more ominous in the seventies. The Soviets retained their numerical superiority, closed the quality gap that had separated NATO and Soviet equipment, and overmatched American theater and tactical nuclear capabilities. Reflecting the deterioration of the correlation of forces, the Active Defense doctrine emphasized the defense. Its authors argued the defense was the only practical tactic against the Soviets in Europe.

The Active Defense corresponded with the transition to a 1 and 1/2 war strategy, with Europe the major effort. The Active Defense doctrine reflected this renewed emphasis

on Europe. The 1976 edition, however, went further than the reorientation of national strategy; it neglected the 1/2 war capability that the strategy called for. This selective tailoring of strategic goals reflected the actual level of resources the Army projected for the seventies. Congress was only willing to pay the bill for a 1 war capability. The exclusive focus on Europe in the 1976 edition was in line with this fiscal constraint.

Finally, civilian skepticism shaped doctrine in the seventies. The Vietnam War shattered the credibility of the military. Since military judgment held little sway in the nation's capitol in the seventies, the Army's leadership made its case with systems analysis. The attrition models could only produce an attrition doctrine.

The other three turn points in doctrine correlate less well with the change in external factors. AirLand Battle Future is the furthest out of line with traditional, external determinants of doctrine.

Though the eighties showed our projections about technology were overly optimistic and that all decisive technological advantages were perishable, AirLand Battle Future assumes the U.S. Army will modernize and retain unilateral advantages. This is particularly unrealistic given the current budget trends. Though our strategy is tending toward mutual security, achieved by mutual reduction

of offensive capability, the next edition of FM 100-5 will call for dramatic increases in the operational range and, therefore, the offensive capability of maneuver forces and weapon systems. Though the United States expects more than ever before to fight side-by-side with allied forces, adopting AirLand Battle Future as doctrine will set the U.S. apart from its allies. Though the evolution of the Soviet threat will eliminate those characteristics that allegedly caused the nonlinearity of the modern battlefield in the eighties, a renewed emphasis on nonlinearity and the resulting transformation of the battlefield framework will be the main thematic innovation in the next edition of FM 100-5. AirLand Battle Future is out of step with external factors. The translation of AirLand Battle Future into doctrine must be caused by factors internal to the Army.

The 1982 edition of FM 100-5 falls half way between these two extremes. Certain external factors correlated well with the AirLand Battle doctrine. The globalization of doctrine in 1982 corresponded with the erosion of Europe's hold on our national strategy. The Carter Doctrine added another extra-European 1/2 war. The Reagan strategy considered Europe but one of three simultaneous major wars. The Army's exclusive focus on Europe since 1976 was abandoned as a result. The maneuverist themes were popular with civilians advocating doctrinal reform. The doctrinal

innovation in 1982 provided the overarching concept for defending, even expanding, budget share in an era of absolute budgetary growth. Changes in strategy, civilian intervention, and resource constraints partially explain the emergence of the AirLand Battle doctrine.

The other external variables are less useful in explaining the 1982 edition of FM 100-5. Technology does not change in a significant way between 1976 and 1982. Instead, the way the Army thinks about technology and its relationship with doctrine changes. The threat does evolve during those six years; a broad front attack replaces the narrow front, multiple echelon, pile on tactics that the 1976 edition had been designed to defeat. The AirLand Battle doctrine, however, recommended that commanders accept risk on the flanks and strike deep to defeat follow-on echelons before they reach the close battle. Both prescriptions reveal that AirLand Battle had not assimilated the change in the threat.

Two elements of the 1986 edition can be traced to external causes. First, the national strategy called for more contingency forces. The Army competed with the Marines for this growing expeditionary mission in the hopes of expanding the Army's budget share. The Army first altered the force structure, arming itself with light forces capable of rapid worldwide deployment. Then the Army backfilled the

doctrinal emphasis on light forces and contingency operations in the 1986 edition. The emphasis in the 1986 edition was partially caused by the change in national strategy and the pressure on the Army's budget share. Second, the civilian interest in interservice cooperation culminating in the Goldwater-Nichols Act was reflected in the clear emphasis on joint operations in the 1986 edition. The other changes that set the 1986 edition apart were generally too subtle to be caused by external change.

External factors do not provide a complete explanation of doctrinal change from 1976 to present. Internal factors explain what external factors cannot. They complete and complement the explanation provided by looking at external factors alone. In particular, internal factors can explain the changing weight of external factors from Active Defense to AirLand Battle and beyond.

CHAPTER 4

INTERNAL CAUSES OF DOCTRINAL CHANGE

External factors would fully determine the Army's doctrine if the Army were rational and unitary. In fact, the Army is neither. It exhibits considerable bias in its decisionmaking, in part because it is composed of a large number of individuals and subsidiary organizations. To explain the evolution in U.S. Army doctrine, we must acknowledge that the Army often strays from perfect, disinterested rationality in its decisionmaking and that it rarely is of one mind on any important issue. By relaxing the assumptions used in systemic theory to justify an exclusive focus on external factors, we add the explanatory power of unit-level theory to our explanation of doctrinal change.

Internal factors shape doctrine in four ways. First, the Army as a whole has particular organizational interests, distinct from the national interest. It writes doctrine to serve these Army interests as well as the national interest. At times, doctrine serves Army interests better than it serves the national interest, and parochial

Army interests explain Army doctrine better than the national interest (or external factors) can.

Second, the process used to develop and validate doctrine shapes the content of doctrine. Sometimes the influence is direct -- the process or method itself prejudicially favors a particular solution. Other times it is indirect -- the process determines the players and the rules of the game, which influences the outcome, but does not determine it.

Third, the Army is composed of branches, schools, and staffs that have particularistic agendas, which may or may not be consistent with the interests of the Army as a whole. Each edition of FM 100-5 is actually a compromise struck between the many bureaucratic players, each vying to shape doctrine to advance its particularistic agenda. The nature of the compromise reflects the relative power of the players, not the "best available thought."[1]

Finally, doctrinal choices are made by people. Doctrinal choices reflect the personal biases of the people who develop and decide doctrine. The formative experiences of individuals shape their view of the world which then

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[1]MG John H. Cushman, the Commanding General of CAC believed doctrine should strive to capture the "best available thought" on how to fight. See John H. Cushman, "The CGSC Approach to Writing Doctrinal Literature," U.S. Army Combined Arms Center, Pamphlet Number 1 (Fort Leavenworth, KS: 18 September 1973), 3-5.

shapes their doctrinal preferences. When the individuals hold key positions in doctrine development or when the formative experiences affect large segments of the Army in similar ways, the Army's doctrine is affected.

Furthermore, people are more likely to rationalize decisions than decide rationally, especially when faced with a difficult choice between primary values under conditions of great uncertainty and ambiguity. People cope with value complexity and uncertainty in a number of ways: rationalization, denial, bolstering, and wishful thinking are often evident. Doctrinal choices often confront Army leaders with difficult choices; their decisions regarding Army doctrine are biased by the techniques they use to escape the value complexity of the choices they must make.

In these four ways, internal factors distort doctrine in the seventies and eighties. Their influence explains the doctrinal change that external factors left unexplained. More importantly, the change in internal factors explains the exceptional power of external factors in explaining the Active Defense doctrine and the subsequent decline in the explanatory power of external factors in 1982 and since.

Organizational Interests

The dominant conclusion of organization theory is that organizations resist change. When obliged to change,

their first reflex is to try to change incrementally.[2]
Organization theory has, as a result, most often been used
to explain the military's resistance to change.

The Army's willingness to undertake doctrinal change
in the seventies and eighties seems to contradict the
dominant conclusion of organization theory. While this set
of theories has, in the past, primarily explained
institutional inertia, it can also expose organizational
incentives for innovation.

Organization theory argues that organizations have
common interests and concerns that partially determine their
behavior. Organization theorists provide a parsimonious
method for predicting the behavior of organizations. They
identify the organizational interests that are common to all
organizations. They assume that organizations are unitary
and rational, though distinctly selfish and parochial,
entities that act in a deliberate and willful manner to
defend or advance their interests. Organization theory
helps us to identify the organizational interests of the
Army and then provides the framework for attributing
doctrinal change to these parochial interests.

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[2]Herbert Simon and James G. March, Organizations (New
York: Wiley and Sons, 1958), 169-171; John Steinbruner, The
Cybernetic Theory of Decision (Princeton, NJ: Princeton
University Press, 1974), 71-86; and Richard Cyert and James
G. March, A Behavioral Theory of the Firm (Englewood Cliffs,
NJ: Prentice Hall, 1963), 118-120.

The Army values stability and dislikes change as much as any large organization. Change disrupts the routines and standard procedures that all large organizations require to perform efficiently. It challenges the division of labor and the division of spoils, reopening the fundamental compromises that reconcile the competing demands of the members of the organization. Change introduces confusion and uncertainty.

Like all large organizations, however, the Army has many other interests. It has a great appetite for resources and jealously resists any reduction in its budget or budget share. It desires autonomy from civilian masters and from sister services. It longs for relief from the uncertainty of war. It wants to be productive, which means it craves decisive victory on the battlefield. It staggers under the weight of peacetime administration and yearns to ease the burden. Stability is but one of the Army's organizational interests.

Defending or advancing one of these other interests may require the Army to change. Any external change may threaten a vital interest or present a lucrative opportunity. Rationally, the Army responds by weighing the costs and benefits of change against those of stability. When the many interests of the Army are taken into account, there is no logical reason to believe that the costs of

change always outweigh the benefits of change. Nor is it certain that the net consequence of stability is always preferable to the net consequence of change. The Army rationally chooses to innovate when change looks better than stability.

There are a number of examples of military organizations accepting the costs of change to protect an interest they valued more dearly. The Marine Corps, searching for a "clear raison d'etre," developed amphibious doctrine during the interwar years.[3] The Marine Corps also fielded its own private air force to preserve its autonomy.[4] The U.S. Army in the fifties raced ahead of the Air Force in missile development to stake a claim to an acquisition budget that was expanding while the budget for general purpose forces was shrinking.[5] In the same period the Army radically restructured its forces into pentomic divisions. Generals Matthew Ridgway and Maxwell Taylor did not want to reorganize the Army, but to protect the Army in the fifties

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[3]Russell F. Weigley, The American Way of War: A History of the United States Military Strategy and Policy (Bloomington, IN: Indiana University Press, 1973), 255.

[4]Barry Posen, The Sources of Military Doctrine: France, Britain, and Germany between the World Wars (Ithaca, NY: Cornell University Press, 1984), 45.

[5]Donald Alan Carter, "From G.I. to Atomic Soldier: The Development of U.S. Army Tactical Doctrine, 1945-1956," (Ph.D. Dissertation, Ohio State University, 1987), 11 and 171.

they needed to demonstrate that the Army could fight on a nuclear battlefield.[6] In all four examples, a military organization underwent change to defend or advance an interest it valued more than stability.

Many of the specific doctrinal changes in the seventies and eighties advanced a specific Army interest. More importantly, taking the many organizational interests into account, the Army had a strong, continuing preference for offensive doctrines. Organization theory explains the allure of the offense and, therefore, its recurrence in Army doctrine.

The first organizational interest of the Army is the preservation and, when possible, expansion of its budget. We have already shown that reductions in the Army's budget spurred the Army to innovate doctrinally in 1976 and that reductions in its budget share explain the innovation in 1982.

The Army's parochial concern for its budget led the Army to prefer offensive doctrines.[7] Offensive doctrines are resource intensive. Generally, an attacker must outnumber the defender. The attacker must outgun the defender. The attacker must secure a mobility differential

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[6]Carter, 218.

[7]Jack Snyder, The Ideology of the Offensive: Military Decision Making and the Disasters of 1914 (Ithaca, NY: Cornell University Press, 1984), 24 and Posen, 49.

relative to the defender. It follows that offensive
doctrines generally provide a better justification for
modernizing, expanding the force structure, and increasing
the budget.

Proponents of AirLand Battle believed the doctrine's
offensive nature provided a better framework for defending
Army interests in the Department of Defense.[8] Both AirLand
Battle and AirLand Battle Future were deliberately conceived
to generate requirements for future acquisition programs.
The majority of the new requirements derive from the most
offensive element of the new doctrines -- the need to see
and strike deep. The advent of the AirLand Battle doctrine
was particularly timely since the Army's share of the
procurement budget was particularly threatened in the early
eighties.

The second organizational interest of the Army is
autonomy from civilian masters and sister services.[9]
Richard Betts has even argued that the military services

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[8]Aaron Blumenfeld, "AirLand Battle Doctrine: Evolution
or Revolution? A Look Inside the U.S. Army" (B.A.
dissertation, Princeton University, 1989), 46.

[9]The theoretical basis for a general organizational
preference for autonomy can be found in James D. Thompson,
Organizations in Action (New York: McGraw Hill, 1967), 19-21
and 74-75.

prefer "autonomy and poverty to political control and wealth."[10]

It is an age old wish of the military that politics end when war begins.[11] Long ago, Sun Tzu warned civilians against interfering with military operations. In an often cited passage, he said, "He whose generals are able and not interfered with by the sovereign will be victorious."[12] The chiefs of the Prusso-German general staff, from Helmuth von Moltke the Elder to von Moltke the Younger, promoted this ideal. Their elaborate mobilization schemes required political leaders to decide early if they wanted war and left little opportunity for civilian intervention once that decision had been made.[13] Military leaders ever since have envied the autonomy of the Prusso-German general staff.

The Army preserves its autonomy from civilian masters by planning for and prosecuting short and decisive wars. The clearest examples of civilian interference in

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[10]Richard K. Betts, Soldiers, Statesmen, and Cold War Crises (Cambridge, MA: Harvard University Press, 1977), 5-15.

[11]See Bernard Brodie, War and Politics (New York: Macmillan, 1973), 11.

[12]Sun Tzu, The Art of War, trans. by Samuel B. Griffith (London: Oxford University Press, 1963), 83.

[13]See Gunther E. Rothenberg, "Moltke, Schlieffen, and the Doctrine of Strategic Envelopment," in Makers of Modern Strategy from Machiavelli to the Nuclear Age, ed. Peter Paret (Princeton, NJ: Princeton University Press, 1986), 296-325.

213

military operations in the contemporary experience of the Army are drawn from the wars in Korea and Vietnam. From MacArthur's relief to the White House's scrutiny of target lists, the Army's contemporary experience demonstrates that prolonged wars fought with limited means for limited ends invite the highest degree of civilian government intrusion in military affairs. The Army finds doctrines that envision a short and decisive war appealing because the military can prosecute these wars in relative autonomy.

Jack Snyder argued that "The military is most likely to be allowed operational autonomy when the operational goal is to disarm the adversary quickly and decisively by offensive means."[14] Only offensives can promise short and decisive wars. Defensive operations risk deterioration into prolonged stalemate. The attacker decides the duration of the conflict. The defender must continue to resist or submit. The desire for autonomy makes short wars and, therefore, offensive options attractive.

The 1976 edition of FM 100-5 envisioned a short defensive war. It assumed that a future war would come to an early end either because the combatants were exhausted or international pressures would impose a cease-fire.[15] It was

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[14]Snyder, 25.

[15]U.S. Army, FM 100-5, Operations (Washington, D.C.: Department of the Army, 1 July 1976), 1-1.

remarkable because it abandoned the prospect of decisiveness. In Korea and Vietnam, the U.S. Army was denied decisive victory. The Active Defense doctrine codified this distasteful prospect. This explains in part why the Active Defense doctrine was never fully accepted by the Army.

The 1982 and 1986 editions envisioned short offensive wars. These editions recommended that the U.S. seize the first opportunity to go on the offensive and then relentlessly press the attack until the enemy collapsed. Commanders were told to expend every effort to maintain momentum. There was no room for operational pauses; the Army needed to operate at full pitch until the enemy submitted. The fewer the limits on offensive action, the more rapidly the Army can achieve the war aims. The 1982 edition even foresaw the early use of nuclear weapons. AirLand Battle doctrine answered the Army's desire for autonomy by presuming a short, decisive, and offensive war.

The Army also reduces its dependence upon civilian authority by increasing the capability and endurance of the active forces. A large standing army with deep war stocks requires fewer civilian decisions early in a military campaign. The greater the capability and endurance of the standing Army, the longer the Army can operate before requiring civilian authority to mobilize.

The 1976 edition of FM 100-5 debuted the Army's concern with being able to fight a "come-as-you-are war." Like most island nations, the United States had a long tradition of reliance on mobilizing national resources after the outbreak of hostilities. The ground-breaking emphasis on peacetime readiness in the 1976 edition is consistent with organizational incentives for autonomy. It persists in each edition since 1976.

The military also tries to deter civilian intrusion by "mystifying their art, and concealing that art from civilian authorities."[16] The 1976 edition broke with this practice. Desperate for the support of civilian authorities, the Army sought instead to reveal the logic of their decisions. The 1976 edition quantified the battlefield, reducing complex interrelationships to formulae. The resulting mathematical models were as transparent to civilian authorities as military leaders. The Active Defense was more science than art.

The 1982 edition rectified this. It illustrated doctrine with historical examples. Military judgement decided which examples were relevant. Military judgement decided what lessons should be drawn. Military judgement supplanted mathematical models as the analytical method. In the AirLand Battle doctrine, war was again an art and the

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[16]Posen, 45.

Army was the fount of knowledge concerning that art. The 1982 edition thus restored the barriers to civilian intrusion.

The founding fathers of organization theory, Herbert Simon and James March, also argued that organizations like the Army reduce uncertainty by attempting to decrease their dependence on, and interaction with, other organizations.[17] The Army would like to be able to operate independently, without relying on the sister services.

Dependence multiplies planning requirements. The planner must develop one plan if the sister service comes through as promised, but also a second worst-case plan in case the sister service denies the Army's request. Furthermore, dependence upon a sister service accords that service bargaining advantages and underwrites the budget share of the sister service. Neither is prudent when the Army must compete with that service for scarce resources.

The most common tactic for reducing dependence is to assume the mission of the other service and acquire the organic capability to execute it. This tactic is doubly rewarding: it reduces dependence while justifying a larger budget share.

On more than one occasion the Army tried to reduce its dependence upon another service. Under the Active

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[17]Simon and March, 159.

Defense doctrine, the Army increased POMCUS stocks in Europe, reducing its reliance on the Navy, but placing a significant share of its heavy forces within range of Soviet theater nuclear and conventional weapons.

Just prior to the drafting of the 1982 edition of FM 100-5, the Army was shocked by the failure of the Air Force to provide any close air support during a joint Army-Air Force exercise in Europe.[18] Though the 1976 edition had entrusted the Air Force with the interdiction of the Soviet second echelon, in the 1982 edition, the Army challenged the Air Force title to this mission. The deep battle was a clear attempt by the Army to reduce its dependence on the Air Force by stealing the mission of interdicting the Soviet second echelon. The Army 86 acquisition program would have given the Army the assets to interdict the second echelon. The Air Force recognized the tactic and reasserted its right to air interdiction. The Army conceded the point in the 1986 edition, but reopened the issue with AirLand Battle Future. Once the Army discovered the value in interdicting the second echelon, its desire for autonomy drove it to try to take control of the mission and acquire the capabilities.

The third organizational interest of the Army is the reduction of uncertainty. Organization theory considers the reduction of uncertainty one of the most common and basic

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[18]Blumenfeld, 61-62.

interests of all organizations.[19] Organizations require
predictability so they can plan, assign responsibilities,
and allocate resources. Uncertainty can hopelessly
complicate the process by allowing multiple possibilities to
persist.

Offensive doctrines reduce uncertainty. The
attacker follows his plan. The defender must plan against
every possible attack, uncertain which attack he will
actually face. The organizational compulsion to reduce
uncertainty leads the Army to favor offensive doctrines.

Barry Posen argued that "Taking the offensive,
exercising the initiative, is a way of structuring the
battlefield."[20] The 1986 edition of FM 100-5 clearly
agreed:

> Initiative means setting or changing the terms of
> battle by action. . . . Initiative requires a
> constant effort to force the enemy to conform to our
> operational purpose and tempo while retaining our
> own freedom of action.[21]

By seizing and retaining the initiative, the Army makes sure
the battle proceeds according to its plan.

The return to an offensive doctrine in 1982, despite
the numerical superiority of the Soviets and the defensive

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[19]Cyert and March, 118-120.

[20]Posen, 48.

[21]U.S. Army, FM 100-5, Operations (Washington, D.C.:
Department of the Army, 5 May 1986), 15.

strategy of the Alliance, can be explained in part by the Army's interest in reducing uncertainty by offensive action. The Army's reluctance to abandon its offensive doctrine in the nineties, though evidence of its inappropriateness accumulates, attests to the Army's hunger for certainty.

Organizations commonly reduce uncertainty by planning against standard scenarios.[22] The Army is no exception. When strategy and budget cuts narrowed the Army's focus to the battle in Central Europe, the Army enjoyed a significant reduction in the number of scenarios it had to consider. The Active Defense doctrine was actually designed against a single scenario -- a narrow front, short warning attack by the Soviets in Central Europe. This overly narrow focus was widely criticized in the late seventies. Nonetheless, the organizational incentives to reduce uncertainty prevented the Army from greatly expanding the number of scenarios it considered. Though the 1982 edition asserted its global relevance, the Central Europe scenario continued to dominate Army planning. In fact, the narrow front attack apparently remained dominant though western analysts had detected a shift toward broad front attacks in the Soviet Army in the late seventies. AirLand Battle Future remains concerned

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[22]Graham T. Allison, _Essence of Decision: Explaining the Cuban Missile Crisis_ (Boston: Little, Brown and Company, 1971), 84.

primarily with war in Central Europe. Its cornerstone
assumption about reduced density of forces producing
nonlinear battles is derived from an analysis of the recent
changes in Europe. As further evidence, the AirLand Battle
Future (Heavy) Special Study Group reached its conclusions
after testing the alternatives against a single scenario:
the Europe VII Corps Scenario.[23] The desire to reduce
uncertainty for planning discouraged the multiplication of
scenarios, even when external factors seemed to require it.

The Army plans in response to standard scenarios.
An offensive doctrine allows the Army to assume that it can
shape the enemy to match the scenario so that its plans can
be implemented.

The fourth organizational interest of the Army is
the desire to preserve and promote its organizational
essence. "The organization's essence is the view held by
the dominant group in the organization of what the missions
and capabilities should be."[24] An organization will resist
innovations that move it away from its essence. It will
ward off efforts by other organizations to replicate its

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[23]CAC History Office, U.S. Army Combined Arms Center
1989 Annual Historical Review (Fort Leavenworth, KS: U.S.
Army Combined Arms Center, 1990), 49.

[24]Morton H. Halperin, Bureaucratic Politics and Foreign
Policy (Washington, D.C.: The Brookings Institution, 1974),
28.

capabilities or sequester its missions.[25] Its motives for the latter are two-fold: it protects budget share, as we have already noted, but it also insures the organization continues to make a distinctive contribution. An organization's identity, or essence, reflects its distinctive missions.

The Army is tasked with and equipped for sustained land combat. The battle in Central Europe is the unchallenged and exclusive domain of the Army. The Army was, as a result, very content with an exclusive focus on Europe so long as that focus advanced its other interests. When budget pressures drove the Army leadership to emphasize half war contingencies, low intensity conflict, and the drug war, a grass-roots reticence about disturbing the Army's organizational essence was very apparent. The European scenarios remained dominant in Army planning, however, in part because they represented the type of war the Army believed it should fight.

The Marine Corps most rivals the Army's organizational essence. Since the interwar years, the Marine Corps ability to conduct land warfare has worried the Army. The two services have vied for the lead on expeditionary forces since the Second World War. The Army argues it holds the title to land combat; the Marine Corps

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[25]Halperin, 39-40.

argues that it is the only service that can introduce heavy forces into a hostile region. This competition took on a new intensity in the eighties when the emphasis in military strategy shifted from the battle in Central Europe to the Southwest Asia contingency. The Marine Corps attempt to take control of the Rapid Deployment Force fanned traditional Army suspicions. The Army concerns were heightened further by the recent Marine Corps jockeying for the lead on expeditionary missions. The rapid erosion of our strategic commitment to forward deployment of large heavy forces in the last two years undercut the Army's position further.

The Army's emphasis on deployable forces emerged just after the 1982 edition was published. It inspired the Army of Excellence reorganization and has gained prominence in each doctrinal publication since. The increasing emphasis on expeditionary operations corresponds with a continuing Marine Corps threat to the Army's organizational essence. The Army's defense of its organizational essence bled into doctrine.

In the recent field manual on <u>Military Operations in Low Intensity Conflict</u>, the Army tried to accommodate the demands of low intensity conflict while preserving its organizational essence. The manual delineates the imperatives of low intensity conflict. The list includes

perseverance, the integration of civilian and military
efforts, the endorsement of a legitimate indigenous
faction.[26] These imperatives are conditions for success.
They describe the type of low intensity conflict that the
Army, if it must, can fight and win. Winning is key to the
Army's organizational essence; the Army believes it should
only be committed to wars that are winnable.

The Army's concern with winning reflects a fifth
organizational interest: sustaining organizational morale.
Morton Halperin explained:

> Because they have learned the vital importance of
> morale for the effective functioning of an
> organization, bureaucrats give close attention to
> the likely effects of any change of policy or
> patterns of action on the morale of the
> organization, and they shun changes which they feel
> will have a severe effect on morale. Even changes
> which would probably improve the organization's
> effectiveness in carrying out its mission may be
> resisted if officials believe that such actions
> would severely affect the morale of the
> organization.[27]

The Army's efforts to sustain organizational morale
influence doctrinal choices.

Short, decisive, and offensive wars preserve the
Army's autonomy. They also offer the greatest promise of
demonstrating the value of the Army. By keeping costs low,

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[26]U.S. Army, FM 100-20, Military Operations in Low
Intensity Conflict (Washington, D.C.: Department of the
Army, 5 December 1990), 1-5 to 1-6.

[27]Halperin, 56.

and achieving tangible results like territory or unconditional surrender, such wars highlight the significant contribution of the Army. The Army is useful, even productive, in an offensive doctrine. The Army is an unavoidable expense in a defensive doctrine. Doctrines that envision short, decisive, and offensive wars promote the Army organizational morale.

An offensive doctrine allows the Army to sustain a more positive image of itself. Barry Posen reasoned that the offense makes soldiers "specialists in victory, defense makes them specialists in attrition, and deterrence makes them specialists in slaughter."[28] An offensive doctrine supports an upbeat organizational outlook.

An offensive doctrine bolsters the morale of the soldiers. The infamous cult of the offensive was installed by French officers, at the turn of the century, who wanted to revitalize a dispirited army.[29] The resulting offensive doctrine was good for morale, until it failed in war.

For similar reasons, the authors of the 1982 edition of FM 100-5 believed that the Army's doctrine had to allow soldiers to "win something." GEN Starry wrote that "The

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[28]Posen, 50.

[29]Douglas Porch, "Bugeaud, Gallieni, Lyautey: The Development of French Colonial Warfare," in Makers of Modern Strategy from Machiavelli to the Nuclear Age, ed. Peter Paret (Princeton, NJ: Princeton University Press, 1986), 406.

purpose of military operations cannot be simply to avert defeat, but, rather, it must be to win."[30]   The Active Defense doctrine defined success as "averting defeat."   The AirLand Battle doctrine replaced this defensive formulation with an offensive doctrine aimed at decisive victory.   GEN Richardson was even more transparent in introducing the 1986 edition.   He explained that "**Not** winning is an anathema to the warrior ethos and is professional nonsense."[31]   Winning, and therefore the offensive, is vital to the Army's morale. The Active Defense doctrine underestimated the Army's attachment to winning.

Armies are particularly concerned with the morale of the professional army, especially the career officers.   The French Army in the early 1900s wanted to protect the professional army and resist the transition to a nation-in-arms.   The military favored an offensive doctrine in part because it required highly disciplined and well trained soldiers.   The offensive doctrine was an excuse for keeping terms of service long, the professional army large, and the reserves in the rear.[32]   Furthermore, "the Dreyfus affair

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[30]General Donn A. Starry, "Extending the Battlefield," Military Review LXI.3 (March 1981): 32.

[31]General William R. Richardson, "FM 100-5: The AirLand Battle in 1986," Military Review LXVI.3 (March 1986): 8. Emphasis appeared in the original.

[32]Snyder, 50-51.

and the subsequent vilification of the army by the Lef⁺ had savaged morale."[33] An offensive doctrine was needed to revive the spirit of the army. The professional army believed that an offensive doctrine would prevent the Left from imposing a greater reliance on reserves and shortening the term of service, while preserving a way of life the officer corps valued highly.[34] The French Army used doctrine to preserve its organizational morale.

Similarly, while the next edition of FM 100-5 is being written, the balance between active and reserve forces is being critically reviewed by a budget-cutting Congress. In a recent article, LTG Frederic Brown argued the AirLand Battle Future doctrine will be too complicated for the reserves.[35] The French example should lead us to wonder if the exclusion of the reserves is, in fact, the intent. By staving off the expansion of the reserves, the Army defends active duty spaces and defines the duties of an officer as too demanding to be mastered by a weekend warrior. Both defend a key organizational value: the morale of the active duty officer corps.

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[33]Porch, 406.

[34]Snyder, 97.

[35]Frederic J. Brown, "AirLand Battle Future: The Other Side of the Coin," Military Review LXXI.2 (February 1991): 18.

The Army's leadership doctrine is also good for officer morale. A romantic image of command, that stresses the importance of the commander's leadership and judgement, is pervasive in the Army. At the Command and General Staff College, Army officers study leadership via Civil War fiction -- Michael Shaara's The Killer Angels. The central figure in Shaara's tale is Robert E. Lee, "the most beloved man in either army."[36] Shaara's mythic portrayal of Lee's leadership of the Confederate Army captures well the Army's preferred image of leadership.

Shaara's novel juxtaposes Longstreet's technical efficiency and Lee's inspirational leadership. The contrast is remarkably similar to the difference between the models of leadership and operational prescriptions advanced in the Active Defense and AirLand Battle.

Ironically, the novel chronicles the Gettysburg Campaign in 1863, Lee's second futile attempt to bring the Civil War to a rapid close with a "Napoleonic victory."[37] Lee's forces were numerically inferior, but they were more agile, better led, and, since they were attacking, they held the initiative. Meade's Union forces remained on the

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[36]Michael Shaara, The Killer Angels (New York: Ballantine Books, 1974), xvi.

[37]Larry H. Addington, The Patterns of War Since the Eighteenth Century (Bloomington, IN: Indiana University Press, 1984), 77-79.

defense, successfully repelling Lee's attacks. Meade won a strategic victory; Lee fell back on Fredricksburg, and the North Virginia front fell quiet.

Longstreet advised against both of Lee's attacks across the Potomac.

> He [was] one of the first of the new soldiers, the cold-eyed men who have sensed the birth of the new war of machines. He [had] invented a trench and a theory of defensive warfare, but in that courtly company [Lee's command] few will listen. He is one of the few high officers in that army not from Virginia.[38]

In models of warfare as in models of leadership, the difference between Longstreet and Lee mirrors the difference between the Active Defense doctrine and the AirLand Battle doctrine.

The 1976 edition broke with a long tradition of assuming superior leadership could decide battles and, in the process, directly affronted the self-image of the officers of the Army. The officers had been leaders and commanders; the Active Defense doctrine seemed to make them technicians and managers. The Active Defense doctrine stripped command of all its romance and greatly constrained the commander's authority. It presumed a level of centralization that substantially reduced the subordinate commander's autonomy. The Active Defense doctrine required officers to play the part of Longstreet; most preferred to

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[38]Shaara, xvii.

play the part of Lee. The Active Defense doctrine undercut the morale of the officer corps.

The AirLand Battle doctrine revalorized leadership, making it one of the elements of combat power, on an equal footing with maneuver and firepower. The emphasis on leadership in the 1982 edition and since is hardly surprising. An offensive doctrine requires decentralized execution and low level initiative. It relies on mission type orders. Subordinate commanders must be allowed to exercise discretion in fulfilling the commander's intent. The emphasis on leadership, which assures officers of the significance of their contribution to the battle, is also consistent with offensive operations. It recurs in the subsequent editions.

The sixth organizational interest of the Army is simplicity. The Army is an enormous organization. Its administration is a daunting task. The Army manipulated doctrine to simplify administration.

All four editions of FM 100-5 presume that a single doctrine can prescribe the Army's way of fighting mid and high intensity conflicts, against any foe, anywhere in the world. All four presume that some pervasive logic inspires all warfare and that universal principles apply. The allure of a single, simple doctrine drew the authors of the 1976 edition into writing a doctrine that had little utility in

wars outside Europe. It led the authors of the 1982 edition
to write a doctrine that was unacceptable to NATO. The 1986
edition, on the surface, affirmed the need to adapt doctrine
to regional constraints. It admitted that AirLand Battle
doctrine would be applied differently in Europe than
elsewhere. The 1986 edition, however, did not explain in
detail how the application of doctrine would vary from
theater to theater. To do so might have made certain
elements of the doctrine, the deep attack for example, look
like nice to have but unnecessary options. Doctrine will
regain its unicity in the next edition of FM 100-5. Though
the manual will place greater emphasis on the low intensity
end of the spectrum of conflict, it will maintain the
presumption that a single doctrine can span all warfare. A
desire for simplicity explains the persistent presumption
that a single doctrine can address the global requirements
of the U.S. Army.

In summary, a number of parochial interests inspired
the changes in doctrine in the seventies and eighties.
Parochial interests partially inspired the extension of the
battlefield and the deep battle, the emphasis on heavy-light
operations and low intensity conflict, and the preference
for a single doctrine. By manipulating doctrine to advance
organizational interests, the Army prevents doctrine from
being the best available thought on how to fight and win

wars. Doctrine represents instead a dynamic compromise between operational and organizational requirements.

Barry Posen studied the evolution of the doctrine of the European armies in the interwar period and came to the following conclusion:

> Predictions about the behavior of civilians and soldiers derived from the organization theory and civil-military relations literature broadly suggest a tendency toward offensive, stagnant military doctrine -- doctrine poorly integrated with the political objectives of a state's grand strategy.[39]

There is strong support for this conclusion in the evolution of U.S. Army doctrine over the last two decades.

The 1976 edition of FM 100-5 was strongly shaped by external factors. It may have been the right doctrine for defending the Army's modernization and budget, but it certainly trampled the Army's other organizational interests. As a result it never enjoyed the support of the Army in the field, though it was official doctrine.

The early eighties were golden years for the Army. The Army got everything it asked for: pay raises, the modernization of the armored fleet, the Apache helicopter, the MLRS. The only exception was Congressional rejection of the request to raise the manpower ceiling to complete the Division 86 reorganization. The Army had survived the transition to the Volunteer Army, and the quality of

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[39] Posen, 40.

soldiers was rising steadily. Congressional reformers were advocating a maneuverist line very much to the Army's liking. The ghost of failure in Vietnam was fading into the past as the Army completed a decade of peace.

During the permissive Reagan years, the Army's organizational interests resurged and the Army returned to an offensive doctrine. Though the mismatch between this doctrine and the environment worsened as the eighties came to a close, the Army held tight to a doctrine that satisfied its organizational interests.

Organization theory predicts an organization will resist change because change is contrary to the organization's interests. The Army acted more like a ratchet in the seventies and eighties. When change went in the direction of Army interests, as in the early eighties, the Army offered little resistance. When change threatened Army interests, as in the seventies and now in the early nineties, the Army resisted mightily. In the seventies officialdom made the necessary but unpopular choices, but the field Army did not follow. In the nineties, neither TRADOC nor the field Army seems willing to compromise the commitment to maneuverism.

Jack Snyder discovered the same pattern in the French Army in the decades prior to the First World War.[40]

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[40] Snyder, Chapters 2 and 3.

In the decade after the Franco-Prussian War, French doctrine was strongly defensive in character. During a golden period, the defensive doctrine that had resulted from battlefield experience in the war was replaced by an offensive doctrine that better addressed the French Army's organizational interests.

The recurrence of this pattern in another country, in another era, facing a different threat, would delight an organization theorist. The most plausible causal factors common to both armies are the organizational interests that imbue armies with an offensive preference.

Organizational Process

The process an organization follows to make a decision often affects the decision. This is a central conclusion of organization theory. Morton Halperin affirms that "There seems little doubt that procedures do make a substantial difference in determining who is involved, in what order, and with what control over the process."[41] Alexander George agrees that the "structure" and "internal processes" of the organization can prevent the organization from making the right decision.[42] He specifically considers

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[41]Halperin, 105.

[42]Alexander George, _Presidential Decisionmaking in Foreign Policy: The Effective Use of Information and Advice_ (Boulder, CO: Westview Press, 1980), 82.

the impact of group size on the quality of decisions, arguing that small, exclusive groups may overlook important considerations and large, inclusive groups may be unable to make tough choices.[43] Finally, Graham Allison contends that knowing the "action channels" and the established "rules of the game" can be important to explaining a decision by an organization. The action channels determine who will be a player in the decision, or how large and inclusive the group will be. The rules of the game determine, among other things, how the decision will be made.[44]

Few decisions have been as thoroughly analyzed as the decision to oppose the Soviet deployment of nuclear missiles in Cuba in 1962. Even this momentous decision was affected by the decisionmaking process. The way President Kennedy structured the process is often credited with improving the caliber of the advice he received. His decision to rely exclusively on the members of the Executive Committee for recommendations and analysis, to isolate the ExCom during the thirteen days of crisis, and to stay away from their deliberations himself are widely identified as

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[43]George, Chapter 4.

[44]Allison, 168-171.

significant determinants of the quality of the decisions that were made.[45]

The Army's doctrinal evolution was influenced by changes in the doctrine development process. Two specific changes, corresponding to Allison's action channels and rules of the game, merit closer attention. First, the number of players varied considerably, from a relatively small, centralized group in 1976 to a more inclusive, consensus-seeking group in 1982 and since. Second, the dominant methods for validating doctrine evolved. Systems analysis dominated in the seventies; historical anecdotes, in the eighties. The change in process correlated strongly with the change in doctrine from Active Defense to AirLand Battle Future.

Earlier we saw that in the seventies, the Army relied more heavily on systems analysis because Congressional confidence in military judgement had waned. Additionally, during the MacNamara decade, many senior executives with a preference for cost-effectiveness analysis rose to positions of great authority in the Department of Defense. In the seventies, the Army opted for systems analysis in the hopes of better persuading both gatekeepers -- Congress and the Department of Defense. In the early

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[45]See for example, Allison, Chapter 6 and Robert F. Kennedy, Thirteen Days: A Memoir of the Cuban Missile Crisis (New York: W.W. Norton, 1969).

eighties, historical anecdotes replaced systems analysis as the dominant analytical method. Military judgement reasserted its authority.

This change in methods was evident in the manuals themselves. Products of systems analysis, force ratios and graphs, were prominently displayed in the 1976 edition of FM 100-5. The 1982 edition was laced instead with historical vignettes. The contrast in method of justifying doctrine was unmistakable.

A pattern was evident: when systems analysis dominated doctrine validation, doctrine derived from attrition theory, exhibited a defensive bias, and a weapon system perspective. When doctrine was justified by the selection of historical anecdotes, maneuver theory inspired doctrine, an offensive bias re-emerged, and the analysis emphasized the psychology of the soldier rather than the lethality of the weapon system. There are reasons to believe that choices between the methods of validating doctrine influenced the doctrine that was chosen.

Systems analysts strive to replicate, with mathematical models, the physics of war with sufficient accuracy to discriminate between alternatives of doctrine, equipment, and organization. Most of the models they use, however, derive from attrition theory.

Models can be crudely grouped into three categories -- static, deterministic, and stochastic -- according to their degree of aggregation, mathematical design, and utility in marginal analysis. Deterministic models dominate systems analysis, for good reason.

Static models compare aggregate measures of firepower on the assumption that the balance of forces will determine success or failure in combat. In the early seventies, the Army began using a system of firepower scores (Weapons Effectiveness Indicators or WEI) that could aggregate heterogeneous weapons to compile a measure of unit firepower (Weighted Unit Value or WUV) relative to a universal base, the Armored Division. The number of Armored Division Equivalents (ADE) of the attacker was then compared to the ADE of the defender, usually expressed as a ratio.[46] The capability of friendly forces could then be raised or lowered to achieve the ideal ratio of forces, determined by military experience and political expedience as often as not.[47]

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[46]William P. Mako, U.S. Ground Forces and the Defense of Central Europe (Washington, D.C.: The Brookings Institution, 1983), 105-125.

[47]Mako, 38-39, discusses the range of force ratios that are typically used: 3 to 1 (attacker to defender) for units of division size or smaller, between 2 to 1 and 1.2 to 1 for corps or theater level operations.

Static force comparisons are appealing because they are simple and allow a high degree of aggregation. However, they cannot validate doctrine. Two identically equipped divisions with different doctrines will have the same ADE. Doctrinal differences are not captured by the firepower indices. Static force comparisons can only guide force development, and then only if the decisionmaker has some other analytical tool that tells him what relative balance is appropriate.

To evaluate the performance of a doctrine, the analyst needs a model that disaggregates the units so that the articulation of the units and weapon systems can be varied to reflect alternative doctrines. Doctrinal comparisons rely most heavily on dynamic models as a result.

Dynamic models can be further broken down into deterministic and stochastic variants. Stochastic models allow the greatest degree of disaggregation and therefore offer the greatest hope for demonstrating the dynamic elements of the battlefield that are so critical to maneuver theory. JANUS is a popular version of a stochastic model that simulates even the individual soldier and his personal weapon.

The disaggregation comes, however, at the expense of an increased prominence of probabilistic outcomes decided by random number generators or human interaction. Stochastic

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models are good training aids but poor decision tools. While the model calculates in a probabilistic manner the chances of success of every engagement, a randomly generated number decides the actual outcome. As a result, no two runs are identical and there is no way to scientifically control for the change in a single variable. Certainly a trend can emerge after many runs, and the analyst can develop confidence that his intuition about doctrine is correct if, more often than not, his intuition works in the stochastic model. It is impossible, however, to rigorously prove the analyst's confidence is not misplaced.

Deterministic models alone allow for scientific discrimination between doctrines. Accepting a measure of aggregation to escape the reliance on random number generators, deterministic models yield the same result every run if the parameters are held constant. The analyst can then introduce a change in a parameter and know the variance in the outcome was caused by that change. Only then can an analyst draw conclusions about the relative worth of a change. Deterministic models allow the marginal analysis that is so essential to conducting a rigorously skeptical cost-effectiveness analysis. This explains why complex and relatively disaggregated deterministic models have informed Army decisions regarding doctrine, organization, and equipment since the mid-seventies. VECTOR, CORBAN, CBS are

examples of deterministic models that are currently used extensively.

All the deterministic models that are influential in the Army's decisionmaking are fundamentally attrition models. Lanchester's famous equations are the fundamental point of departure for them all, and Lanchester's equations are simply a mathematical expression of attrition warfare.[48] They assume that success is determined by relative firepower. Derivative models predict the movement of the FLOT, the casualty rates, and rates of advance as a function of force ratios.[49] The models generate "attrition curves" which describe the evolution of the unit's status. Lanchester's equations model attrition theory.

Systems analysis favors doctrines derived from attrition theory. The attrition bias inherent in the mathematical formulation of the models rewards superior firepower and punishes maneuver. Systems analysis also favors machine over man; it models the lethality and survivability of weapon systems, not the psychological

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[48]John W. R. Lepingwell, "The Laws of Combat? Lanchester Reexamined," International Security 12.1 (Summer 1987): 89-134, provides an excellent review of Lanchester equations and their extensive use in military modelling.

[49]William W. Kaufmann, "Nonnuclear Deterrence" and "The Arithmetic of Force Planning," in Alliance Security: NATO and the No-First-Use Question, eds. John D. Steinbruner and Leon V. Sigal (Washington, D.C.: The Brookings Institution, 1983), 43-90 and 208-216, provides a classic example.

effects and human factors that are so important to maneuver theory. The combined effect is a bias in favor of attrition theory whenever systems analysis is used.

Systems analysis dominated decisionmaking on doctrine in the seventies but held much less sway in the eighties, especially in the area of doctrine development. In the mid-seventies, Congressional pressures drove the Army to objective methods of demonstrating the need for weapons modernization. The Army relied heavily on mathematical modelling. Most importantly GEN DePuy integrated the development of doctrine and the fight for weapons modernization into a unified process, thereby subjecting doctrinal innovations to systems analysis.[50] Doctrine developers during the seventies were obsessed with numbers.[51] This explains in part the hold of attrition theory on the 1976 edition, its defensive bias, and its weapon system focus.

While systems analysis remained influential in Army force development decisions in the eighties, its influence over doctrine declined. The authors of the 1982 edition were not swayed by the fruits of systems analysis. Pieces

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[50]MAJ Paul H. Herbert, "Deciding What Has to Be Done: General William E. DePuy and the 1976 Edition of FM 100-5, Operations," Leavenworth Papers 16 (Fort Leavenworth, KS: Combat Studies Institute, 1988), 76-81.

[51]David L. Tamminen, "How to Defend Outnumbered and Win," Armor 84 (March-April 1973): 9-12, is an example.

of the doctrine were rigorously analyzed: the deep attack
grew from the Field Artillery School's Integrated
Battlefield and the Corps 86 studies, which relied heavily
on systems analysis.[52] The maneuverism of the 1982 edition
was not, however, the result of a systems analysis. In
fact, the Central Battle Study, which used systems analysis
to assess maneuver forces in the late seventies, upheld the
numerical conclusions of the Active Defense doctrine,
demonstrating for example that ratios of greater than 5 to 1
were "required to overcome an organized, determined
defense."[53]

In the early eighties, a selective use of history
displaced systems analysis as the dominant methodology for
doctrine validation. The shift was first apparent in
articles by GEN Starry. Starting late in 1978, he used
history to refute the re ilts of earlier systems analyses.[54]
After explicitly referring to the outcome of the Central
Battle Study, GEN Starry argued that "The history of 1,000

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[52]John L. Romjue, "From Active Defense to AirLand
Battle: The Development of Army Doctrine 1973-1982," TRADOC
Historical Monograph Series (Fort Monroe, VA: United States
Army Training and Doctrine Command, June 1984): 27, 34-39,
and 40-42. See for more detail Romjue's footnote 30. Note
also the emphasis on graphs derived from the Integrated
Battle Study in Starry, "Extending the Battlefield," 44-45.

[53]Romjue, 24.

[54]Donn A. Starry, "A Tactical Evolution -- FM 100-5,"
Military Review LVIII.8 (August 1978): 6-7.

tank battles told quite a different story."[55]   In a sketch,

not a graph, he illustrated the assertion that in 1,000 tank

battles a lesser ratio, though a ratio that still favored

the defender, was evidenced. He never provided the data

base for his analysis, and data bases which categorize

victors and losers and span decades are notoriously

vulnerable to manipulation. The reader has trouble

believing there has even been 1,000 tank battles that were

sufficiently documented to aggregate responsibly into such a

data base. While this new analysis has the flavor of

numerology, it is transparently historical. More

importantly, in this example, the TRADOC Commander revealed

that when systems analysis and history disagreed, he sided

with history. He also revealed he was not very discerning

in the proper use of either numerical or historical methods.

Starting with the 1982 edition, doctrine developers

looked mostly to history for insight into how to fight.

Wass de Czege and Holder, the principal authors, stated it

plainly:

> The theoretical content of the manual is drawn from
> the lessons of history, the writings of the great
> military theorists and the Army's historic approach
> to operations.[56]

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[55]Starry, "A Tactical Evolution -- FM 100-5," 6.

[56]Huba Wass de Czege and L. D. Holder, "The New FM 100-
5," Military Review LXII.7 (June 1982): 55.

The authors of 1982 edition dropped all pretense of a validation of doctrine in systems analysis.

The displacement of systems analysis in doctrine development persisted through the eighties. There is no evidence that a deliberate systems analysis influenced the 1986 edition in any way. In that edition, however, the amount of text dedicated to historical illustration increased significantly. The on-going revision of FM 100-5 is currently being authored by Lieutenant Colonel Thomas Mitchell. LTC Mitchell does not defend an element in the emerging doctrine by pointing to its performance in computer models. He reasons, instead, from a historical analogy that he finds persuasive. He is relying exclusively on history as a guide to doctrine.[57]

Systems analysis introduces a bias that favors defensive doctrines; a selective use of history allows organizational interests to displace operational requirements. Historical analogy is a permissive method for validating doctrine. Unless history is used analytically and methodically, it is very susceptible to bias.

History is like a smorgasbord. The methodical analyst would have to sample every item before he could draw conclusions about the smorgasbord in general -- a daunting

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[57]LTC Thomas Mitchell, Fellow, School of Advanced Military Studies, interviewed by the author 8 March 1991.

task. The proponent simply walks up to the smorgasbord and selects those items he has a taste for already. The less discriminating the proponent, the more satisfied he is with the smorgasbord.

The French Army concealed the displacement of operational requirements by organizational interests behind a selective use of history. From 1880 to 1902, Colonels Louis Maillard and Henri Bonnal, professors of tactics at the War College, preached the primacy of the offense. They relied almost exclusively on the Napoleonic battle and discounted the experiences of the Franco-Prussian War, the Anglo-Boer wars, and the Russo-Japanese War. Maillard and Bonnal selectively and purposefully used history to lay the intellectual foundation for the cult of the offensive prior to World War I.[58]

As a recent work by Carol Reardon makes clear, the U.S. Army's "disregard for the scholarly standards of scientific history" also dates from the nineteenth century.[59] Reardon argues the Army prefers "history-as-illustration" or anecdotal history.[60]

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[58]Robert Allan Doughty, The Seeds of Disaster: The Development of French Army Doctrine, 1919-1939 (Hamden, CT: Archon Books, 1985), 79.

[59]Carol Reardon, Soldiers and Scholars: The U.S. Army and the Uses of Military History, 1865-1920 (Lawrence, KS: University Press of Kansas, 1990), 6.

[60]Reardon, 6.

By casually sampling history, the Army portrayed organizational interests as operational requirements in the eighties as the French had in the 1800s. Just as the French skipped over the lessons of recent wars, the authors of the 1982 edition skipped over the experiences in Vietnam and Korea. They illustrated the manual with examples from the Civil War and the Eastern Front of the First World War. The skeptical reader might wonder why the Eastern Front of the Second World War was not used. The theory of Marshall M. N. Tukhachevskii and Soviet practice after the Battle of Kursk provide much stronger support for the tenets of AirLand Battle. Perhaps they were dissuaded by the statistical analysis that showed the Soviets always enjoyed crushing qualitative and quantitative advantages.[61] The Soviet analysis concluded that successful attacks required oppressive numerical superiority, at the point of contact and across the theater.[62]

The authors were equally selective with theory. For example, they cited Clausewitz's depiction of the defense as "a shield of blows" but not his more central theme -- that

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[61] Viktor Antonovich Matsulenko, "Encirclement Operations and Combat," in Readings for Applied Tactical Operations, Volume III (Fort Leavenworth, KS: U.S. Army Command and General Staff College, Academic Year 1989-1990), 259.

[62] Richard E. Simpkin, Race to the Swift: Thoughts on Twenty-First Century Warfare (New York: Brassey's Defence Publishers, 1985), 37-42, and Matsulenko, 293 and 296.

the defense is the stronger form of war. Furthermore, the authors reasoned by analogy without testing the validity of the analogy. They invoked the teachings of Clausewitz and Jomini, derived from an analysis of the classic, decisive battles of the Napoleonic era. Though warfare had changed dramatically, casting doubt on the assertion that the distant past and the present were analogous, they unhesitatingly reasoned by analogy.

Historical analogy devoid of method or rigor is the most permissive technique for validating doctrine. The analyst is able to choose the data that supports his thesis and discard all data that casts doubt on his thesis. It is not surprising that when historical analogies are the primary guide for doctrine, operational requirements give way to the Army's organizational interests.

Coincident with this change in analytical methods, the Army also altered its process for developing doctrine. The 1976 and 1982 editions of FM 100-5 were produced by significantly different processes. The change in organizational process partially explains the substantive differences in the two editions.

The 1976 edition was developed by a centralized, hierarchical, and exclusive group. GEN DePuy used his authority as the first TRADOC Commander to directly control the doctrine development process.

In 1972, under Operation Steadfast, the Army
established a new command: the Training and Doctrine Command
(TRADOC). Operation Steadfast

> consolidated under a single commander three
> logically interrelated functions: research into new
> techniques of land warfare, to include equipment
> capabilities; development of doctrine and
> organization; and training of soldiers, non-
> commissioned officers, and officers according to
> established doctrine so that they would be prepared
> for their assignments in the field.[63]

GEN DePuy was the first commander to exercise direct control
over all three functions.

Earlier we saw that, in the mid-seventies, doctrine
was greatly influenced by systems analysis. There were many
reasons for the increased weight of systems analysis. In
part, the Army leadership understood that the Army needed a
seemingly objective and credible method of justifying their
choices before a skeptical Congress. In part, the emphasis
on systems analysis resulted from the integration of the
development of requirements for specific items of equipment,
design of force structure, and the formulation of doctrine
in TRADOC.

Systems analysis was an essential part of the
marginal analysis that was needed to justify buying a new
piece of equipment or altering a unit's organization. It
was only natural that, within the headquarters charged with

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[63]Herbert, 22.

managing all three areas, systems analysis would spill over into the validation of doctrine.

In the mid-seventies, operational concepts were developed by the Combined Arms Combat Developments Activity (CACDA). CACDA was focused primarily on the development of hardware, which explains why operational concepts, and therefore doctrine, focused primarily on weapons capabilities.

Furthermore, TRADOC had more systems analysis resources than the branches did. The branch schools did not have the resources to subject doctrinal concepts to as extensive a systems analysis as TRADOC could. As the role of TRADOC in doctrine development increased, the resources available for detailed quantitative analysis increased. For all these reasons, the consolidation of functions under TRADOC partially explains the increased influence of systems analysis on doctrine in the mid-seventies.

The new TRADOC organization was designed to insure the integration of the schools and the developers as well. TRADOC included, for the first time, in one command the responsibilities for training and the development of doctrine, organization, and the requirements for equipment. A subordinate integrating center was formed -- the Combined Arms Center (CAC). CAC served as an intermediate coordinator between TRADOC and the combat arms branch

schools. It ran the Command and General Staff College, researched combat developments, and wrote doctrine. CAC was ideally positioned to integrate the doctrinal pieces from each branch school and to integrate training and doctrine development. It filled neither role in the development of the 1976 edition of FM 100-5.

GEN DePuy centralized the writing of the 1976 edition of FM 100-5 at the TRADOC level. He wanted to use doctrine as a tool to change the Army.[64] He was not interested in compiling contributions from the field because he believed a radical departure was needed. He had taken a number of organizational initiatives to consolidate his control over doctrine and he intended to exercise that power.

The original concept was developed at TRADOC, under GEN DePuy's close supervision. The concept was floated at a conference in 1974 (the Octoberfest conference) where the commandants of the branch schools offered little criticism.[65] Had CAC been the drafter of the concept, the conference would have had a very different tone. The branches were surely less candid with TRADOC, their higher headquarters, than they would have been with CAC, which had no authority over the branches.

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[64]Herbert, 54.

[65]Herbert, 47-48.

Interpreting the silence at the Octoberfest conference as assent, GEN DePuy tasked CAC with drafting a revision of FM 100-5. Major General John H. Cushman, CAC Commander, however, held distinctly different views on tactics and on the purposes of doctrine.[66] His initial draft was rejected by GEN DePuy. GEN DePuy decided that TRADOC Headquarters would write FM 100-5.

By elevating the revision of FM 100-5 to TRADOC level, GEN DePuy broke the connection between the schools and the developers of doctrine. When the 1976 edition of FM 100-5 was published, the schools were tasked with teaching a doctrine that they had not developed and in which they had little confidence. GEN DePuy had intended to impose doctrine on the Army via the schools,[67] but the way he developed doctrine cost him the support of the schools.[68] The resentment that persisted in the schools undercut TRADOC's efforts to garner support for the doctrine.

By writing the new FM 100-5 at TRADOC, GEN DePuy hampered the integration of input from the branches, schools, and staffs. For example, TRADOC Headquarters had no office specifically concerned with nuclear weapons.

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[66] Herbert, Chapter 5.

[67] Herbert, 42-43.

[68] Blumenfeld, 33-34. The remarks by GEN Starry in footnote 40 are telling.

There was a study team at Fort Leavenworth, that would have figured more prominently in a manual developed there, but, when TRADOC assumed control over FM 100-5, it made the integration of nuclear weapons much less likely.[69] On the other hand, GEN DePuy did not really want input from the branches, schools, and staffs. He had a very clear idea of what he wanted in the doctrine; all he wanted from the branches was their acquiescence.

In the end, the 1976 edition was written by GEN DePuy. MG Starry, Major General Thomas M. Tarpley (Commander of the Infantry Center), and Brigadier General Paul F. Gorman (Deputy Chief of Staff for Training, TRADOC), drafted chapters,[70] but DePuy revised the final draft without inhibition. The final version reflected GEN DePuy's uncompromised concept of how the Army should fight.

The centralization of the doctrine development process let GEN DePuy impose his concept of how the Army should fight on FM 100-5. It explains in large part why the 1976 edition could be so responsive to external factors and so neglectful of many of the Army's organizational interests. The centralization allowed an uncommon degree of pragmatism and coherence.

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[69]Herbert, 90.

[70]Herbert, 59 and 92-93.

The Operation Steadfast reorganization gave the TRADOC Commander the power to write doctrine, if he wanted. Implementing the doctrine, however, required the support of the Army at large. By centralizing doctrine development, GEN DePuy excluded branch parochialism. He also excluded the valid concerns and insights the branches may have offered. The resulting doctrine was rejected by the Army. GEN Starry, the TRADOC Commander in the early eighties, was sure to avoid repeating this mistake.

GEN Starry's process for developing doctrine was aimed at building and sustaining a durable consensus for the new doctrine. In an article entitled "To Change an Army," GEN Starry analyzed the Army's rejection of the Active Defense doctrine. He concluded that "all too little consensus building had been done." He argued that all major changes needed a "champion" or "spokesman" who "must build a consensus that will give the new ideas, and the need to adopt them, a wider audience of converts and believers."[71] GEN Starry substantially revised the doctrine development process.

GEN Starry had experienced the futility of developing a doctrine that the Army would not implement. By building a consensus during the concept development phase

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[71]General Donn A. Starry, "To Change an Army," Military Review LXIII.3 (March 1983): 20-27.

and sustaining the consensus through the drafting of the new manual, he would be sure of developing a doctrine that the Army would willingly implement.

GEN DePuy held his cards close to his chest, exposing his operational concept only when he was sure it would hold up to scrutiny. He wanted to be sure the idea would survive; he cared much less about soliciting feedback that might refine the idea.

GEN Starry, in contrast, rapidly wrote up each study and disseminated the results in TRADOC publications. TRADOC was continually studying some aspect of the battlefield; the Corps Battle, the Central Battle, the Integrated Battle, the Extended Battle, and the AirLand Battle were the milestones of the doctrinal evolution.[72] Each study elicited a discussion that revealed branch, school, and staff positions. When common ground was discovered it became part of the emerging consensus on an operational concept. Doctrine was not developed until the concept was agreeable.

GEN Starry established the Office of the Deputy Chief of Staff for Doctrine (ODCSDOC) in 1979.[73] The ODCSDOC was charged with developing the Army's operational concepts. CACDA developed the operational concepts in the mid-seventies. Since CACDA also wrote the requirements for

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[72]Romjue, Chapter 3, describes each of these studies.

[73]Blumenfeld, 37-38 and Romjue. 27-29.

weapon systems, it introduced a weapon system bias in the Active Defense doctrine. ODCSDOC was focused exclusively on developing operational concepts. This alteration of the development process reduced the influence of weapons development on doctrine. It placed a strong advocate for the primacy of operational concepts on the TRADOC staff and provided the doctrinal "spokesman" GEN Starry wanted. In its first two years, the new office disseminated 21 operational concepts.

The process was changed in a second way. In 1980, GEN Starry approved a regulation providing for a "doctrinal literature program."[74] The program specified that doctrinal literature would no longer be managed directly by TRADOC Headquarters. CAC was given responsibility for the production of doctrinal field manuals and the Command and General Staff College was charged with actually writing the manuals. The doctrinal literature program made the school the author of doctrine. Lieutenant General William R. Richardson, the CAC Commander, was no doubt pleased. He often said "Those who teach should write; those who write should teach."[75]

Once the operational concept enjoyed a wide consensus in the Army, the Department of Tactics (DTAC) at

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[74]Romjue, 30.

[75]Cited in Blumenfeld, 96.

the Command and General Staff College wrote the 1982 edition of FM 100-5. This was an important part of consensus building. GEN Starry wanted the school to believe in the new doctrine so that it would teach it convincingly. GEN Starry did not want the school to undercut AirLand Battle doctrine as it had the Active Defense doctrine.

Once DTAC had completed a draft, TRADOC circulated it widely in the field, reaching as low as battalion commands. GEN DePuy kept a firm hold on the drafts of the 1976 edition until he felt it was final. GEN Starry in contrast "wanted early comment from the field."[76] Briefing teams travelled widely, soliciting comments on the coordinating draft. Civilians that had criticized the Active Defense doctrine were invited to comment on the draft. The draft was briefed to the annual FORSCOM Commanders Conference. A number of changes resulted from the staffing of the coordinating draft. Notably, explicit references to mission-type orders and to designating and sustaining the main effort at an enemy point of vulnerability were added in response to growing empathy in the field for the German Auftragstaktik and Schwerpunkt.[77]

Once the 1982 edition was ready, TRADOC went to great pains to promote it inside and outside the Army. The

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[76]Romjue, 57.

[77]Romjue, 59.

schools rapidly incorporated the new doctrine into the curriculum. The ODCSDOC explained the new doctrine to the Department of Defense, Congress, and the civilian community. TRADOC took great pains to avoid the contentious debates that had followed the release of the 1976 edition.

The changes in the process altered the doctrine. It reduced the weapons-oriented bias, the emphasis on systems analysis, and, most importantly, increased the weight of recommendations from the branches and the field.

The revised process insured that the 1982 edition enjoyed the support of the Army and that the Army would enjoy the useful support of some key civilian leaders. The process sought and achieved consensus.

A consensus, however, is built through compromise, through TRADOC watering down its best estimate of how to fight to accommodate the concerns of the Army. We started this section on process with GEN Starry's prescription for how to change an Army. In the end, the way to change an Army is to not ask it to stray too far from the parochial interests.

Contrasting the process used to develop the two editions reveals a paradox. When the process is centralized, doctrine is less susceptible to parochial interests, but less likely to be accepted by the Army. When the process seeks consensus, the Army's support is secured

by compromising the content of doctrine. Which approach actually changes the Army more is not clear. Furthermore, doctrine will only be implemented if parochial interests are assuaged, yet answering all the parochial interests may result in a doctrine that is inconsistent with its environment. Which approach best serves the nation is not clear either.

Since the 1982 edition, the process for developing doctrine has hardly changed. The widespread staffing that distinguished the 1982 edition is now routine. A reorganization in 1990 definitively placed doctrine writers in the school and established, in the College, the Concepts, Doctrine, and Development Directorate.[78] The recent reorganization, therefore, extended the decentralization of the process and codified the consensus-building approach to doctrine development.

We saw earlier that decisions about what organization will write the doctrine can affect its content. AirLand Battle Future provides a contemporary example. By tasking CACDA with developing the AirLand Battle Future concept in 1987, TRADOC insured the Conventional Forces in Europe (CFE) negotiations would weigh significantly in doctrinal decisions. CACDA was the lead organization for

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[78]Jim Tice, "TRADOC Streamlines to Fit Changing Times," Army Times, 13 August 1990, 16.

assessing the impact of CFE on the Army as well.[79] This
simultaneous tasking may explain the strong emphasis on
post-CFE Europe in AirLand Battle Future.

In summary, the process of doctrinal development and
validation is reflected in the content of doctrine. When
the process was changed, a change in doctrine resulted. The
conclusion is significant: choices about how doctrine would
be composed and evaluated introduced bias into the doctrine
itself.

When doctrinal choices hinged on performance in
numerical models, doctrine reflected an attrition theory
bias. When historical analogy was used to justify doctrinal
choices, maneuver theory supplanted attrition theory. A
responsible analyst always distrusts an outcome when it
covaries with his method of analysis.

When doctrine was developed through a consensual
process, doctrine was most strongly skewed by the
organizational interests of the Army. When a centralized
process was used, doctrine was the most loyal to external
factors, even those that were contrary to the Army's
interests.

A consensual process allows the interests of the
Army to dominate doctrine. It also allows the branches,
schools, and staffs within the Army to push and pull

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[79]CAC History, 1989, 61.

doctrine in ways that advance their distinctive parochial interests. The next section will shift focus to the intra-organizational rivalries that affect doctrine.

Bureaucratic Politics

The theory of bureaucratic politics focuses the analyst on two primary determinants of the behavior of the organization: the interests of the players and the relative influence or power of the players over the decision. In applying bureaucratic politics to the Army, we relax the assumption that the Army acts as a unitary whole, and focus on the particularistic agendas of the branches, schools, and staffs.

The theory assumes each of these players has distinctive interests because "where you stand depends on where you sit."[80] The "stand" taken by any player is influenced by the parochial "stakes" he sees in the issue. Each player is assumed to be a rational egoist, striving to better his personal lot.

For example, the Field Artillery School is an empassioned advocate of the deep attack because field artillery is uniquely capable of carrying out that mission. The greater the Army's emphasis on the deep attack, the

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[80]Allison, 166-168 and 176; Halperin, 85-86; and Richard E. Neustadt, Alliance Politics (New York: Columbia University Press, 1970), 76-78.

stronger the branch's claim to a larger share of the scarce

resources within the Army. DTAC, a sub-element of the

Combined Arms Center which teaches tactics at the College to

field grade officers from all branches, is far more

interested in portraying combat as a combined arms

operation. In the early eighties, DTAC wanted to reduce the

emphasis on the deep attack as an end in itself, to tie the

deep attack to the close battle and portray the deep attack

as a precondition to decisive maneuver.[81] Egoistic reasons

motivated the doctrinal preferences of both organizations.

Bureaucratic politics assumes organizations rarely

achieve optimal solutions to problems. Instead, they

reconcile the divergent intra-organizational interests.

Decisions are political resultants:

> resultants in the sense that what happens is not
> chosen as a solution to a problem but rather results
> from compromise, conflict, and confusion of
> officials with diverse interests and unequal
> influence; political in the sense that the activity
> from which decisions and actions emerge is best
> characterized as bargaining along regularized
> channels among individual members of the
> government.[82]

Graham Allison portrays the decisionmaking process as a

political tug-of-war. "Each player pulls and hauls with the

power at his discretion for outcomes that will advance his

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[81] Blumenfeld, 64.

[82] Allison, 162.

conception of national, organizational, group, and personal interests."[83]

If each player advances a distinctive agenda reflecting distinctive interests, the decision will necessarily favor some of the players at the expense of the others. How close the decision is to the desired outcome of a player is a measure of the relative power of the player. The decision reflects the distribution of power within the organization. For example, the prominence of GEN DePuy's preferences in the 1976 edition reflected GEN DePuy's virtually unrivalled power over doctrinal decisions.

Power is "an elusive blend of at least three elements: bargaining advantages, skill and will in using bargaining advantages, and other players' perceptions of the first two ingredients."[84] Bargaining advantages derive from many sources; position in the hierarchy is but one determinant of power. For example, there can be a great deal of power in holding the pen, being the author of the draft.

The emphasis on bargaining advantages is often misconstrued as a total disregard for the objective correctness of the position a player advances. On the contrary, it is much easier to defend a proposition that is

[83]Allison, 171.

[84]Allison, 168.

fundamentally right-minded. When parochial interests coincide with what is objectively "right," the player enjoys a great bargaining advantage. The theory of bureaucratic politics, however, reminds us that the Army does not always do "what's right." Often, it does what it can without losing the support of the branches, schools, and staffs.

A familiarity with economics can also create a misleading interpretation of bureaucratic politics. Some analysts seem to assume a parallel between the competitive market and the dissentious bureaucracy. In the competitive market, rational egoists achieve an equilibrium that is Pareto optimal. This is rarely true in bureaucratic politics, mostly because the assumptions of economics rarely hold. The bureaucratic players are fewer in number and their distribution of power is often very unequal. Bureaucratic equilibriums can be, and often are sub-optimal. In politics, players acting in their self-interest rarely achieve the optimal solution for the organization as a whole.[85]

There is ample evidence that bureaucratic politics provides a useful insight into government decisionmaking. Many of the greatest presidential mistakes are attributed to decisions that were skewed by the parochial interests and

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[85]Mancur Olson, The Logic of Collective Action: Public Goods and the Theory of Groups (Cambridge, MA: Harvard University Press, 1965), 1-3.

relative power of elements of the U.S. Government. The Bay of Pigs invasion is probably the most widely analyzed.[86]

The U.S. Army has had its share of mistaken decisions as a result of intraservice rivalry. Alan Carter, studying the evolution of doctrine in the decade after the Second World War, reached the following conclusion:

> The growing intraservice parochialism prevented the Army from consolidating its postwar study into a coherent combat doctrine. With each branch trumpeting the advantages of its particular approach, the interests of the Army were often overlooked. As a result, the Army usually fared poorly against the more unified positions presented by the Air Force and Navy. Army influence in budgetary and strategic discussions declined accordingly.[87]

There is a historical precedent for the parochialism of branches, school, and staffs disrupting the Army's doctrine development.

The theory of bureaucratic politics provides keen insight into the doctrinal evolution from the Active Defense to AirLand Battle and beyond. The Army is composed of branches, schools, and staffs that have particularistic agendas, which sometimes are, but often are not, consistent with the interests of the Army as a whole. Each edition of FM 100-5 is actually a compromise struck between the many

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[86]See for example Richard E. Neustadt and Ernest R. May, _Thinking in Time: The Uses of History for Decision Makers_ (New York: The Free Press, 1986), 140-156.

[87]Carter, 215.

bureaucratic players, each vying to shape doctrine to advance its particularistic agenda. The nature of the compromise is determined by the relative power of the players. The doctrine that results will rarely be the "best available thought."

GEN DePuy centralized decisionmaking power at TRADOC, minimizing the influence of branch parochialism. He served personally as the gatekeeper on FM 100-5. The centralization and hierarchical organization tamped down branch, school, and staff parochialism.

The Operation Steadfast reorganization gave the TRADOC Commander the span of control he needed to integrate the branch schools. It also gave him the authority to choose between the branches. GEN DePuy exercised that authority to accentuate doctrine's focus on mechanized, heavy forces and to insure the doctrine focused on the lessons of the 1973 Arab-Israeli War, not the Vietnam War. He gave the Armor Center, commanded by then Major General Donn Starry, the lead in concept development for all mechanized forces, both armor and infantry. GEN DePuy's motives were clear; he wanted changes that the Infantry School was unlikely to propose.[88]

MG Starry was given the lead on concept development for mechanized forces because he agreed with GEN DePuy on

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[88] Herbert, 41.

most issues in tactics. There were, however, some persistent differences. MG Starry feared the new doctrine was too defensive. He wanted the defense to include bolder and less limited counterattacks than GEN DePuy was willing to accept. MG Starry knew that the more the defense resembled the attack the greater the role of tanks would be.[89] If doctrine came to support a static or strongpoint defense, like the defense proposed by the Infantry School in 1974, the importance of tanks would decline. GEN DePuy offset MG Starry's armor bias by assigning the first draft of the chapter on the defense to MG Tarpley and the Infantry School. GEN DePuy could trust the Commander of the Infantry School to propose a defense that relied less on counterattacks. Once the chapter on defense was drafted, GEN DePuy left MG Tarpley out of the final draft altogether.[90] GEN DePuy and his personal staff -- the boathouse gang -- personalized the drafts of all the chapters, setting most issues in concrete, before assembling GEN DePuy, MG Starry, and BG Gorman to put the final and largely superficial touches on the final draft.

MG Starry and GEN DePuy did not see eye to eye on doctrine management either. GEN Starry wanted to invite the Army's early scrutiny of the emerging Active Defense

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[89]Herbert, 81.

[90]Herbert, 92-93.

doctrine, but GEN DePuy considered the proposal premature.
He wanted to overwhelm the Army with a media blitz and the
rapid publication and distribution of the finalized
doctrine. GEN DePuy expected resistance from some elements
of the Army. He wanted to infiltrate the pockets of
resistance with converts trained in TRADOC schools after the
doctrine was final. MG Starry wanted to take greater pains
to garner the Army's support for the new doctrine. Again,
GEN DePuy rejected MG Starry's recommendation out of hand.[91]
GEN DePuy managed the doctrinal process as he saw fit.

The 1976 edition focused almost exclusively on
conventional warfare. This neglect of chemical and nuclear
warfare can be explained as a bureaucratic outcome. There
was no advocate for the inclusion of either in the closed
circle that actually crafted the doctrine.

We saw earlier that the centralized doctrinal
development process hampered the consideration of nuclear
weapons. Late in the process of formulating the Active
Defense doctrine, however, the nuclear weapons community
tried to push doctrine for the employment of nuclear weapons
into the 1976 edition. A draft chapter, prepared by the
Nuclear Doctrine, Organization, and Equipment Study Team and
the U.S. Army Nuclear and Chemical Agency, placed
unprecedented emphasis on the offensive use of nuclear

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[91] Herbert, 42-43.

weapons.[92] An increased emphasis on nuclear weapons was clearly in line with the interests of the nuclear weapons community. It was, however, contrary to GEN DePuy's interests. It would have put in jeopardy the support of the German military that he counted on to persuade the rest of the Army. Furthermore, it would have limited the distribution of a manual that he wanted to distribute widely. The eviscerated chapter on nuclear weapons that was finally included reveals the monopoly GEN DePuy exercised over the 1976 edition.

TRADOC simply overlooked chemical weapons. When a draft of the 1976 edition was reviewed by the Army staff, a Chemical Corps staff officer in the Office of the Deputy Chief of Staff for Operations noted the absence of a chapter on chemical weapons. Sparked by the neglect of matters he held dear, the officer recommended the inclusion of a chapter on chemical weapons and was tagged with writing the draft.[93] Modelling his chapter on the revised chapter on nuclear weapons, he provided the second descriptive and ancillary chapter on unconventional warfare in the 1976 edition.

The centralization of the doctrine development process skewed the power distribution in TRADOC's favor. It

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[92]Herbert, 90.

[93]Herbert, 90-91.

269

placed the development of doctrine under the thumb of GEN DePuy. GEN DePuy did what he thought was best, disregarding the violence he did to the Army's intraservice consensus. The degree of dissatisfaction with the doctrine revealed just how many of the Army's proponents had been excluded from the process.

The losers in the fight over the content of doctrine dragged their feet, slowing implementation of the 1976 edition. They were quick to propose the re-evaluation of the Active Defense doctrine. This is wholly consistent with the theory of bureaucratic politics.[94] Organizations endure. Their fundamental interests evolve slowly. If a decision today denies those interests, in time, an opportunity to re-open the issue will appear, and the organization will seize the opportunity to reverse the decision that went against its interests.

GEN Starry's consensual approach distributed power widely, allowing many players to influence doctrine development. The 1982 edition, as a result, includes a piece of every player's agenda. Few ideas were translated directly into doctrine without compromise.

The Field Artillery School promoted the deep attack and succeeded in making it the centerpiece of the new doctrine. The motives of the Artillery School were clear.

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[94]See Allison, 172-173 and Halperin, Chapter 13.

Deep attack by fires or maneuver justified modernization of the artillery equipment: MLRS, target acquisition radars, a follow on to Lance, and ATACMS.

The Field Artillery School's influence over doctrine derived from multiple sources. Its promotion of the deep attack concept provides the best example of how bureaucratic politics affected doctrine.

The Field Artillery School secured the support of many key allies early on. GEN Starry, the new TRADOC Commander, believed one of the greatest weaknesses in the Active Defense doctrine was its neglect of the Soviet second echelon.[95] The Field Artillery School formed a special doctrinal group including the Director of Combat Developments, Colonel Anthony Pokorny, and an officer from the Concepts Division, Major John S. Doerfel. Both had worked with GEN Starry on interdiction of the Soviet second echelon while he commanded V Corps.[96] This personal link was reinforced by a common emphasis at the Field Artillery School and TRADOC on firepower and, as a result, a shared confidence in firepower models and systems analysis. The value of the deep attack could be readily demonstrated with computer modelling which was particularly persuasive with

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[95]Herbert, 97.

[96]Romjue, 35 and Blumenfeld, 43-44.

TRADOC Headquarters[97] and important elements in the Department of Defense.[98] The authors of the 1982 edition in DTAC, however, were not impressed with firepower models. A second group at the Field Artillery School, which included then Lieutenant Colonel Richard Sinnreich, developed a historical case for deep attack that the DTAC authors found more persuasive.[99] The deep attack concept required improved intelligence collection and processing so it had ready-made allies in CACDA (the C^3I branch),[100] the Intelligence Center,[101] and the Office of Research, Development, and Acquisition, Department of the Army.[102]

Seizing the initiative is as important in bureaucratic politics as it is in warfare. The real power of the Pokorny-Doerfel group derived from their position on the bow wave of change. Their concept of deep attack structured much of the debate about doctrinal reform in TRADOC in the early eighties.

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[97]Blumenfeld, 64.

[98]Britt Lynn Edwards, "Reforming the Army: The Formulation and Implementation of 'AirLand Battle 2000,'" (Ph.D. dissertation, University of California, Santa Barbara, 1985), 229.

[99]Blumenfeld, 64.

[100]Blumenfeld, 41.

[101]Blumenfeld, 68.

[102]Edwards, 222.

The Field Artillery School tied the deep attack to
the use of nuclear weapons in the Integrated Battlefield
concept. Renewed emphasis on tactical nuclear weapons in
the late seventies lent support to the deep attack concept.
In 1978, the Supreme Allied Commander, Europe, General
Bernard Rogers, expressed concern at the lack of technical
knowledge in the officer corps regarding nuclear weapons.
After the Inspector General confirmed that GEN Rogers'
concerns were well-founded, a Nuclear Special Program Review
(NSPR) was scheduled for late 1979.[103] The NSPR proved a
good platform for promoting a concept that not only called
for the integration of conventional and nuclear fires, but
also the integration of those fires in attacking the enemy's
second echelon by fire.[104] The Field Artillery School
secured the endorsement of both the Chief of Staff of the
Army and the Vice Chief of Staff. Early in 1980, the Chief
of Staff of the Army, General Edward C. Meyer published a
"white paper" that called for an aggressive effort to define
the Army's nuclear and chemical doctrine.[105] The following
fall, the share of the CGSC curriculum dedicated to

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[103]Blumenfeld, 43.

[104]Romjue, 37.

[105]General Edward C. Meyer, Chief of Staff, "A Framework
for Molding the Army of the 1980s into a Disciplined, Well-
Trained Fighting Force," U.S. Army White Paper 1980 (25
February 1980).

unconventional weapons was increased dramatically. Inside DTAC, the Integrated Battlefield Committee was formed. Both developments heightened DTAC's interest in deep attack and nuclear weapons.

The Active Defense doctrine neglected nuclear weapons because nuclear weapons lacked an advocate. The AirLand Battle doctrine derived, in part, from a concept that had nuclear weapons at its core. Furthermore, Lieutenant Colonel Richmond B. Henriques, the author of the earliest drafts of 1982 edition, was considered "an expert in tactical nuclear weapons."[106] This base of support for nuclear weapons explains the much greater emphasis on nuclear weapons in the 1982 edition.

An open dispute over the purpose of the deep attack simmered throughout the early eighties. The Field Artillery School, supported by the ODCSDOC, arguing from a firepower perspective, tended to view the deep attack as an end in itself and overstate the potential of the deep attack to destroy elements in the second echelon. Both the Field Artillery School and ODCSDOC wanted a doctrine that justified weapons modernization. GEN Starry sided with the Field Artillery School and ODCSDOC.[107]

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[106]Blumenfeld, 49.

[107]The ambitious goals he sets for the deep attack in his article "The Extended Battlefield" leave little doubt about where GEN Starry stood.

Artillery could destroy soft combat support and combat service support vehicles with conventional munitions, but nuclear weapons were required to destroy enemy armored units of the second echelon. Wanting to play up the contribution of the deep attack in simulations, the Field Artillery School either destroyed soft targets in the enemy's rear and glossed over whether that would be sufficient to decide the close battle or employed nuclear weapons and glossed over whether political release would be granted.[108]

DTAC and the CAC Commander, Lieutenant General William R. Richardson, preferred to consider the deep attack a precondition for maneuver. They argued for a formulation that stressed combined arms. Whereas TRADOC was concerned mostly with the future direction for the Army, CAC was focused more on the near term. Its more modest concept for the deep attack was more in line with current capabilities.

An independent study by BDM took issue with the Field Artillery School's targeting priority, recommending that armored vehicles and artillery ammunition stocks would have greater tactical payoff than combat service support assets.[109] The BDM study was consistent with the DTAC position which argued that the deep attack was primarily

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[108]Blumenfeld, 40 and 44.

[109]Blumenfeld, 40.

aimed at separating the echelons in space and time so that they could be defeated in detail by maneuver forces in the close battle.

This dispute over the purpose and targets of the deep attack was never effectively resolved. TRADOC Pam 525-5, published in March 1981, presented the ODCSDOC position, and the 1982 edition of FM 100-5 was closer to the DTAC position. In both cases, the agency holding proponency for the publication was able to impose its preferred view. One way to preserve consensus was to allow the difference to persist. Of course, the coherence of doctrine in the early eighties suffered.

The emphasis on maneuver in the 1982 edition had its origins in DTAC. Instructors worried that the emphasis on target servicing in the Active Defense was replacing tactics.[110] They longed for a greater doctrinal emphasis on maneuver. Furthermore, Auftragstaktik fascinated the instructors of DTAC in the early eighties.[111]

The authors of the 1982 edition evinced a predisposition to rely on historical analogy and an affinity for maneuverism. LTC Henriques, a former history instructor and the author of the earliest drafts of FM 100-5, distrusted firepower models and preferred historical

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[110] Romjue, 53.

[111] Blumenfeld, 59.

analysis. LTC Wass de Czege, the principal author of the 1982 edition, also preferred historical analogies and advocated resurrecting the principles of war. He stressed the importance of seizing the initiative and viewed war as a clash of wills.[112] LTC Holder, a cavalry officer fresh from an assignment under one of the Army's most ardent maneuverists, Colonel Robert Wagner, was primarily responsible for injecting maneuver into the chapters on offense and defense in the 1982 edition. LTC Holder also found inspiration in history and the writings of the classic military theorists.[113] None of the authors had a background in systems analysis. The team was noticeably stacked against firepower and in favor of maneuver.

The return to maneuver theory in DTAC was warmly received. LTG Richardson, with the support of GEN Meyer, wanted to restore the balance between the offense and the defense.[114] He insisted on the need for a reserve that could decide battles with a counterattack. GEN Starry agreed. He was a cavalry officer at heart and had recommended the 1976 edition assign greater priority to the counterattack. The return to maneuver was bolstered by a number of like-minded advocates outside the Army: the

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[112]Blumenfeld, 54.

[113]Blumenfeld, 52-53.

[114]Blumenfeld, 57, and Romjue, 30-32.

Department of Defense Office of Program Analysis and Evaluation[115] and the Congressional Military Reform Caucus.[116] With this much support, a return to maneuverism in the 1982 edition was virtually guaranteed.

Bureaucratic politics also explains the introduction of the operational level of war in the 1982 edition.[117] LTC Henriques worked on FM 100-15, the Corps Operations manual, just prior to assuming responsibility for FM 100-5. He launched the 1982 edition on a higher level than the tactical, division-and-below level that had been the focus of the 1976 edition. GEN Starry, however, preferred to leave the operational level of war to the corps level manual. LTC Wass de Czege agreed, arguing that the Army was not ready to step up to the operational level yet. The Infantry School added its support, believing the key AirLand Battle concepts should not be implemented below the division level.[118] The ODCSDOC, always interested in setting the future course of the Army, wanted to introduce the operational level of war in the 1982 edition. The Army War College and the German officers that consulted on the manual agreed with ODCSDOC. The Field Artillery School, which was

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[115]Edwards, 217.

[116]Edwards, 229.

[117]Blumenfeld, 48-44 and 65.

[118]Blumenfeld, 68.

routinely focused above the brigade level, argued the operational level was needed. GEN Starry's vote decided the issue initially. The first draft did not include any reference to the levels of war.

GEN Starry, however, left TRADOC before the 1982 edition was published. His successor, General Glenn K. Otis, sided with those who wanted to introduce the operational level of war in the 1982 edition.[119] The balance of power shifted, and LTC Wass de Czege added a discussion of the levels of war.

This explains why the levels of war are not well integrated into the 1982 edition. LTC Wass de Czege barely had the time to graft the levels of war onto the draft before publication. Consequently, the levels of war were not an integral part of the manual until the 1986 edition.

Finally, the Army was divided on the tone of the manual. The Infantry School and the Field Artillery School wanted the 1982 edition to retain the "how to fight" tone of the 1976 edition. The Infantry School wanted doctrine to remain tactical in focus. The Field Artillery, which functioned according to battle drills and procedures, was more comfortable with a specific doctrine, but the tone of a manual dedicated mostly to maneuver was hardly worth fighting over. As long as FM 100-5 put the deep attack into

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[119]Romjue, 61.

doctrine, the Field Artillery could provide the specifics in its branch-specific manuals. The Armor Center, CAC including DTAC and the authors of the 1982 edition, and TRADOC argued vehemently that the 1982 edition should merely provide the Army a framework to structure thought about war, a common lexicon, but no specific prescription. The opposition of the Infantry School withered before this coincidence of interests.

In 1982, the consensual process produced a doctrine that generally respected the interests of the branches, schools, and staffs. The cost of consensus was coherence.

When the 1976 edition appeared, the losers outnumbered the winners. It was only a matter of time until the losers organized a doctrinal revolt. The 1982 edition, in contrast, was built upon a fairly broad consensus. The Infantry School was the only proponent who could argue it had experienced a net loss. As the theory of bureaucratic politics would predict,[120] the Infantry School, disadvantaged in the fight over FM 100-5, advanced its interests in other fora where it enjoyed greater bargaining advantages.

The 1976 edition explicitly snubbed the Infantry. When GEN DePuy realized the Infantry School did not share

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[120]halperin tells us to expect players who fail to get their way within the system to "go outside," 181-188.

his tactical views, he simply cut them out of the process. Though the Infantry branch was dominated by light infantry leaders, GEN DePuy tried to turn most of the Infantry into Panzergrenadiers. Sensing their reticence, he put MG Starry in charge of concept development for all mechanized forces. By the late seventies, a wedge separated light and mechanized Infantry.

The 1982 edition emphasized maneuver and the deep attack. This pleased the Armor, Mechanized Infantry, Field Artillery, and Aviation communities. The 1982 edition, however, held little appeal for the light Infantry. The Infantry branch could not hope to overcome this oppressive coalition.

The light Infantry saw opportunity elsewhere. The Carter doctrine signaled a renaissance in contingency operations. The new Chief of Staff, GEN Meyer, gave unprecedented emphasis to contingency operations in his first "White Paper." The light Infantry, insufficiently armed and armored for the high intensity battle in Central Europe, was uniquely capable of rapid deployment to Southwest Asia or other hot spots. While the heavy Army forged a consensus on the doctrine for fighting in Europe, the light Infantry focused on contingency operations.

The Light Division Study and the High Technology Test Bed project were begun in 1980. In 1981 studies of the

contingency corps and its higher echelon were launched. The light Infantry community focused its effort on these studies rather than the drafting of the 1982 edition of FM 100-5.

In 1983, Division 86 restructuring ran up against the manpower ceiling; the 16 division force structure was 200,000 manpower spaces short.[121] This was the first problem GEN Wickham, a light infantryman himself, faced as the new Chief of Staff.

GEN Wickham directed TRADOC to fix the force structure problems.[122] Specifically, he told TRADOC to reduce the size of the J-series structure to fit within the manpower ceiling while shifting capabilities to corps that were needed to implement the AirLand Battle doctrine and adding two 10,000 man Light Infantry Divisions to the force structure. He gave TRADOC 90 days to complete the Army of Excellence Study, and it did. The Army has since implemented TRADOC's "recommendations." Unable to fight within TRADOC, the light Infantry community went outside to Department of the Army where interservice rivalry, changing national priorities, and sympathetic Chiefs of Staff assured them a full hearing.

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[121]John C. Bahnsen, Jr., "The Kaleidoscopic U.S. Army," *Armed Forces Journal International* 123 (November 1985): 82.

[122]Sam Damon and Ben Krisler (pseudonyms), "'Army of Excellence'? A Time to Take Stock," *Armed Forces Journal International* 122 (May 1985): 86-87.

The Concepts Based Requirements System supposedly gives doctrine the lead in determining how the Army will train, provision, and organize for war. In 1986, however, the Army's force structure and acquisition choices influenced doctrine. Doctrine, or how the Army fights, must take into account how the Army is equipped and organized to fight. The increased emphasis on low intensity conflict and deployability in the 1986 edition of FM 100-5 is little more than an admission of the lightening of the force structure under the AOE reorganization, which was caused in part by inter-branch rivalry within the Army.

AirLand Battle was popular within the Army, though many questioned whether the Army had the resources to implement it.[123] Once the Army had the doctrine it preferred, there was little internal impetus for change. The 1986 edition of FM 100-5 responded mostly to external criticism, though the level of response was determined by intraservice politics.

TRADOC, the Army's ambassador, wanted to reduce tensions with the Air Force and NATO nations that had been aggravated by the 1982 edition. This interest was spurred in 1983. GEN Wickham, the new Chief of Staff of the Army,

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[123]Two examples: William Brinkley, "The Cost Across the FLOT," Military Review LXVI.9 (September 1986): 30-41, and Bloomer D. Sullivan, "Logistical Support for the AirLand Battle," Military Review LXIV.2 (February 1984): 2-16.

had a long-standing friendship with GEN Charles A. Gabriel, Chief of Staff of the Air Force. In short order, the two chiefs reached agreement on 31 separate initiatives. The more precise language of the 1986 edition, concerning the Army's interaction with the Air Force, merely wrote these agreements into doctrine.

NATO criticized two aspects of the doctrine: its offensive maneuver and its apparent willingness to resort early in a conflict to the use of nuclear weapons. The Army was willing to concede the latter but not the former. The nuclear weapons community never held much influence in the Army. The Field Artillery School had relied on nuclear weapons to promote the deep attack in the early eighties, but by the mid-eighties the place of the deep attack in Army doctrine was secure. The Army at large was chronically uncomfortable with nuclear weapons and had repeatedly shown the willingness to ignore unconventional weapons completely. There was little resistance to greatly softening the references to nuclear weapons in the 1986 edition.

Maneuverism, however, was essential to the consensus that supported the AirLand Battle doctrine. It was too central to the doctrine to be extracted. The Army was unwilling to alter so fundamental an aspect of its doctrine. The Army tried, instead, to convince the Europeans that they had merely misunderstood the doctrine. A few vague phrases

were added that emphasized the doctrine would be aligned with the theater in which it was applied. Fundamentally, the 1986 edition ignored NATO's concerns with the offensive nature of the U.S. Army's doctrine.

Radical departure from the 1982 edition was unlikely in 1986 simply because the key players in 1982 were still in position to shape doctrine in 1986. GEN Richardson, CAC Commander in 1982, was now commanding TRADOC. Colonels Wass de Czege and Holder remained deeply involved in the 1986 edition. The principal author, COL Sinnreich, worked on the 1982 edition while at Fort Sill and served as the primary liaison between the Field Artillery School and the DTAC authors.

COL Wass de Czege founded the School of Advanced Military Studies (SAMS) in the years between the two editions. SAMS was dedicated to the study of the operational art; its influence on doctrine was apparent in the 1986 edition. The levels of war were pasted into the 1982 edition, but they provided the fundamental structure to the 1986 edition. For as long as SAMS exists, the Army will have advocates for maintaining the focus of FM 100-5 on the operational level.

COL Sinnreich used the power that comes with being the principal author to refine AirLand Battle doctrine in subtle ways. COL Wass de Czege readily admitted that

logistics was neglected in 1982.[124] The emphasis on the operational level in the intervening years made the inadequacy of the chapter on logistics even more apparent. Arguably, the operational level is mainly concerned with logistics. COL Sinnreich insured the 1986 edition gave greater thought to logistics.

GEN Richardson took credit for insuring the authors of the 1982 edition wrote a manual that "eschew[ed] a formulaic doctrine of any kind -- anything that suggested a recipe for combat."[125] His watchfulness was probably unnecessary in 1986. COL Sinnreich was concerned that the principles of AirLand Battle were being reduced to bumper sticker slogans in the schools. He watched the principles of the Active Defense doctrine suffer a similar fate in the late seventies. The TRADOC Commander and the principal author insured the 1986 edition was even more conceptual and less "formulaic" than the 1982 edition.

It is far too early to draw any conclusions about the influence of bureaucratic politics on AirLand Battle Future. Bureaucratic politics explains a decision by finding within it a reflection of the interests of the

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[124]Huba Wass de Czege, "Army Doctrinal Reform," in The Defense Reform Debate, eds. Asa A. Clark IV and others (Baltimore, MD: The Johns Hopkins University Press, 1984), 107.

[125]Romjue, 53.

parties to the decision and the distribution of power within the organization. The decisions about the precise content of the next edition of FM 100-5 have not been made yet. There is, however, evidence that bureaucratic politics have influenced the studies of the late eighties which inspired the on-going revision of FM 100-5.

As the budget leveled off in the mid-eighties, the Army found it was increasingly difficult to get the proponents to agree on decisions that affected budget shares.[126] The TRADOC Inspector General identified the source of the problem:

> the tendency for piecemeal study efforts that focused on a single system and did not provide defense leaders with enough information to judge the impacts on the Army and defense budgets. This resulted in much slower acquisition of systems than provided for in the original production schedules. Systems distributed to the Army at the end of the extended schedule frequently were obsolete or required extensive and expensive product improvements. This, in turn, pulled dollars away from the procurement of more recently developed systems. The Army needed an integrated approach based on concepts that crossed the spectrum of proponents.[127]

TRADOC had every interest in an integrated study. As resources declined, the TRADOC Commander needed a rational basis for choosing between systems the proponents wanted.

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[126]This is exactly the behavior the theory of bureaucratic politics would predict. See Samuel P. Huntington, The Common Defense (New York: Columbia University, 1961), 416-417.

[127]CAC History, 1989, 34.

The budget simply would not support all the requested

purchases.

While TRADOC Commander, GEN Carl E. Vuono, launched

an integrated study -- the AirLand Battle Future study.

This study produced the concept that inspires the on-going

revision of FM 100-5. GEN Vuono's successor, GEN Maxwell

Thurman, split out from the overall study, the AirLand

Battle Future (Heavy) Special Study Group (SSG).[128] The SSG

was tasked with taking an integrated look at the

requirements for heavy forces in Europe in the year 2004.

The SSG's methodical study produced a concept and

force design that was endorsed by the Chief of Staff of the

Army and the Army Staff. Its recommendations, however,

enjoyed little support from the proponents. The CAC History

provided the following explanation:

> The [SSG] had the strengths and weaknesses of an
> integrated approach to the modernization of the
> Army. It provided a balanced and interrelated
> solution to problems. It did not commit itself to
> any particular proponent's view of the development
> of its area. In fact, one of its great
> vulnerabilities was that in a proponent system (such
> as in TRADOC and the combat development community
> generally) it did not have an advocate. All the
> proponents had vested interests in not implementing
> the study, but rather in shelving it in favor of
> their favored projects.[129]

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[128]CAC History, 1989, 39-59.

[129]CAC History, 1989, 57-58.

The SSG particularly angered the Armored Family of

Vehicles/Heavy Force Modernization community when it

convinced GEN Thurman that the Armored Family of Vehicles

was too expensive for the Army.[130]

The proponents obstructed the implementation of the

SSG results. No proponent had an interest in helping the

Chief of Staff or the TRADOC Commander make tough choices

between programs. However, as each proponent "pulled and

hauled" for its particular interests, the Army squandered

increasingly scarce resources.

The permissive environment of the early eighties

facilitated the forging of a new consensus on doctrine. In

the nineties, the declining budget heightens intraservice

rivalries which makes forging a new consensus difficult.

The theory of bureaucratic politics suggests that the next

edition of FM 100-5 will face stiff resistance if it strays

from the current consensus.

A second example of the influence of bureaucratic

politics on doctrine unfolded during the summer of 1990.

Initially, the AirLand Battle Future study assumed the

future battlefield would be transparent. Planners believed

that advances in technology would allow the corps commander

to always know the location of every enemy unit. JSTARS was

the main source of this perfect intelligence. Though JSTARS

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[130]CAC History, 1989, 55 and 59.

performed to expectations in the Kuwait Theater of Operations, the AirLand Battle Future study now only assumes that the corps commander will "know where **significant** enemy forces are **almost** all the time."[131]

It is very likely that the Armor School caused this shift in AirLand Battle Future assumptions. JSTARS seemed to cast doubt on the future need for scouts. The Armor School argued, somewhat anxiously, in the spring and summer of 1990 that scouts would still be needed because electronic means could be deceived, jammed, and destroyed.[132] Furthermore, the Armor School was quick to point out that security tasks would increase on a more open battlefield. By the fall, these qualifications were incorporated into the conclusions of the AirLand Battle Future study.[133]

The compromises made at the behest of bureaucratic politics usually detract from the coherence of doctrine. This is no exception. The AirLand Battle Future study is now in the unenviable position of arguing on the one hand that long range sensors provide intelligence so nearly perfect that they revolutionize the battlefield, but, on the

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[131]The citation is from Foss, 21, emphasis added. COL Stephen J. Kempf, Director of CDD, highlighted the shift in emphasis in his briefing on 23 January 1991.

[132]Briefing by MG Foley at West Point and Fort Leavenworth in the spring and fall of 1990 respectively.

[133]Foss, 36, argues that "Reconnaissance and security tasks increase on the more open battlefield."

other hand, that these new technologies, like all those that came before, can be defeated. AirLand Battle Future, however, is wholly dependent on consistent and reliable long range intelligence.

As an aside, the descriptions of the AirLand Battle Future concept in the 1989 CAC Annual Historical Review and the many briefings that were given at the College this year leave me convinced that futurism is more hazardous than either history or systems analysis. With either of the latter methods, the analyst must at least rationalize his exclusion of contradictory evidence. The futurist merely imagines an alternative future. GEN DePuy rejected long range studies, arguing that "People aren't smart enough to see what we'll need in the year 2000."[134] In that, he was probably right.

The theory of bureaucratic politics warns us to be wary of the particularistic agendas of participants in a decision. Two changes in the distribution of power risk biasing doctrinal choices in the nineties.

First, SAMS has held proponency for the revisions of FM 100-5 since the school was formed. COL Sinnreich wrote the 1986 edition while serving as the Director of SAMS. The

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[134]Romie L. Brownlee and William J. Mullen III, _Changing an Army: An Oral History of General William E. DePuy, USA Retired_ (Carlisle Barracks, PA: United States Military History Institute, 1987), 181.

lead author of the on-going revision is a SAMS fellow. SAMS
is the Army's school of the operational art. The school has
a strongly historical bent, though it does not deliberately
teach historical methods. This virtually insures FM 100-5
will continue to rely on historical analogies and retain an
operational level focus.

Second, the decision to form an Aviation branch
altered the distribution of power in the Army.
Specifically, it bolstered the already dominant coalition
favoring deep attacks. It strengthened the hand of a
constituency that is predisposed to think the battlefield is
nonlinear. The Aviation branch's support for AirLand Battle
Future is assured, but not for the right reasons. MG
Ostovich unabashedly admits that AirLand Battle Future will
"serve to expand the role of Army aviation."[135]

The pooling of fire support and aviation assets at
the corps level, recommended by the AirLand Battle Future
study, will be readily endorsed by two powerful
constituencies -- the Field Artillery and the Aviation
communities. Consolidation at corps level will create
brigade level commands, increase branch autonomy, and insure
that when these forces are committed they make a big splash.
The authors of the next edition of FM 100-5 would be well-

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[135]MG Rudolph Ostovich III, "Army Aviation in AirLand
Battle Future," Military Review LXXI.2 (February 1991): 25.

advised to approach this recommendation with a healthy does of skepticism.

In summary, by considering the parochial interests of branches, schools, and staffs and weighing the distribution of power between these constituencies, we gain insight into why certain doctrinal choices were made. Their distinctive interests lead these constituencies to choose sides on most issues. Doctrine most nearly approximates the interests of the most powerful coalition.

In 1976, the hierarchical and centralized doctrinal process allowed GEN DePuy to drive doctrine as he saw fit. GEN Starry's doctrinal process built a consensus by accumulating the agendas of the constituencies. The 1982 edition gave the Army the doctrine it wanted. Satisfied, the Army's constituencies resisted external pressure to alter doctrine in 1986 and will likely do the same in the early nineties.

Cognitive Psychology

In the end, decisions are made by people, and people rarely make tough decisions rationally. Alexander George, a pioneer in employing the insights of cognitive psychology to analyze government decisionmaking, explained:

An executive's political behavior will be shaped by a variety of cognitive beliefs (ideology, world view, beliefs about correct political strategy and tactics, etc.) that he has acquired during the course of his education, personal development, and socialization into political affairs. In other words, much of an individual's behavior as a political decisionmaker will reflect what he has learned along the way either through direct or vicarious experience. . . .[136]

Beliefs determine the particular way the decisionmaker perceives, evaluates, and interprets information, which in turn biases the decisions he makes.

While such beliefs can change, what is noteworthy is that they tend to be relatively stable. They are not easily subject to disconfirmation and to change in response to new information that seems to challenge them. Instead, individuals (including decisionmakers) tend to downgrade discrepant new information of this kind or interpret it in ways that reduce its inconsistency with their prevailing beliefs, images, and theories of the physical, political, and social world.[137]

Cognitive psychologists warn that rationalization is more likely than a rational decision. To explain a decision, we must know more than the facts, we must appreciate the bias that results from the decisionmaker's particular view of the world.

Cognitive psychology is the least parsimonious method for explaining doctrinal decisions. It tells us to consider the beliefs of every significant actor a possible

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[136]Alexander L. George, _Presidential Decisionmaking in Foreign Policy: The Effective Use of Information and Advice_ (Boulder, CO: Westview Press, 1980), 5.

[137]George, 57.

source of bias. It is not possible to psychoanalyze the many personalities that influenced doctrine over the last two decades. We can, however, demonstrate with a few examples the correlation between the formative experiences and doctrinal prescriptions of a few key individuals.

The 1976 edition codified GEN DePuy's doctrinal preferences. GEN DePuy's doctrinal preferences reflected his experience in thirty years of military service.[138] GEN DePuy's baptism by fire was with the 90th Infantry Division during the Second World War. The 90th Infantry Division was deployed to Europe after hasty mobilization and inadequate training and fared poorly as a result; the 1976 edition stressed the need to maintain peacetime readiness so that the Army could win the first battle. The withering fire of German Panzergrenadiers inflicted heavy casualties as the 90th Infantry Division attacked well-placed defensive positions; the 1976 edition favored the defense and stressed the need for suppressive fires and cover. In two months of fighting, the division replaced 100 percent of its riflemen; the 1976 edition emphasized the lethality of the modern battlefield. GEN DePuy commanded the 1st Infantry Division in Vietnam. He never commanded an echelon above the division level; the 1976 edition had a purely tactical

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[138]Herbert, Chapter 2, provides a concise review of GEN DePuy's formative experiences. For a more detailed exposition, see Brownlee and Mullen, 40-179.

focus.   As Assistant Vice Chief of Staff of the Army, GEN

DePuy witnessed the termination of the Cheyenne attack

helicopter and the MBT-70 main battle tank.   He participated

directly in defending the Army's budget before the

Department of Defense (DOD), which submitted Army requests

to rigorous cost-effectiveness analysis.   The Active Defense

doctrine, validated by systems analysis, was more easily

defended before a skeptical audience.   More than any

previous doctrine, it provided the structure needed to

defend force development in DOD.   GEN DePuy had recently

experienced the pressures in the Capitol, and he fashioned

doctrine with those pressures in mind.   Clearly, GEN DePuy's

formative experiences shaped his tactical prescriptions.

GEN Starry provides another compelling example of

the influence of formative experiences on doctrinal

prescriptions.   As a Major General, having recently

commanded a division, he shared GEN DePuy's view of tactics.

He collaborated with GEN DePuy, drafting several of the

chapters of the 1976 edition.   After assuming command of the

V Corps, GEN Starry discovered a shortcoming in the

doctrine.   From the perspective of a corps commander, he saw

that the 1976 edition had not placed sufficient emphasis on

Soviet follow-on echelons.   Winning the first battle was not

enough.   The defender had to simultaneously interdict the

follow-on echelons.   If the Soviets were free to pour the

second echelon into the battle before the defender had defeated the first, the defender would be overwhelmed. Within months of becoming a corps commander, GEN Starry began to argue for the acquisition of the means to delay, disrupt, and even destroy the follow-on echelons. As TRADOC Commander, GEN Starry was a powerful advocate for the deep attack which was incorporated into doctrine in the 1982 edition. GEN Starry's experience as a corps commander was a proximate cause for the TRADOC Commander's enthusiasm for introducing the deep attack in the 1982 edition.

GEN Starry had much less control over doctrine in 1982 than GEN DePuy had in 1976. GEN Starry's experience as a corps commander explains his advocacy of the deep attack, but only bureaucratic politics explains why his advocacy was effective. The 1982 edition introduced the deep attack because GEN Starry's preference enjoyed support from the Field Artillery and other powerful allies.

There is a strong correlation between the formative experiences of GEN Foss, the current TRADOC Commander, and the emerging AirLand Battle Future doctrine. GEN Foss commanded the 82d Airborne Division and XVIIIth Airborne Corps. We would expect him to advocate deployability, stress the utility of light forces, and emphasize low-intensity conflict. The next edition of FM 100-5 will do all three. GEN Foss served in Vietnam at the small unit

level. At that level, Vietnam was a war of motion, with no distinct lines. When the enemy forces were detected, friendly forces deployed from secure bases, defeated the enemy, then returned to the bases. Vietnam, at the small unit level, was analogous to the nonlinear battlefield that GEN Foss now advocates. The formative experiences of GEN Foss shape his tactical preferences and bleed into doctrine.

GEN Foss does not decide doctrine alone, however. The current process of doctrine development produces a doctrine that rests on a broad consensus. GEN Foss' personal experiences correspond with key changes in doctrine because those experiences are common to a whole generation of officers. The generation of officers that currently decide doctrine shared GEN Foss' formative experiences in Vietnam; they also served in Vietnam as small unit leaders. Emerging doctrine reflects this common experience of a generation of officers.

A decisionmaker's beliefs lead him to prefer certain options. The ability to rationalize the choice of a preferred option in spite of discrepant information increases when the decisionmaker or the decisionmaking group is placed under stress. Irving Janis, a social-psychologist, has contributed greatly to our understanding of the problems of real-world decisionmaking. He discovered

that a stressful environment can erode critical intellectual capacities of individuals and groups.[139]

We have all seen an individual become defensive and lose his objectivity when placed under stress. Similarly, an embattled group may slip into what Janis calls "Groupthink." Threatened by their environment, the individuals of the group rely more on the mutual support of others in the group. The group becomes less tolerant of dissenting views and promotes conformity at the expense of "reality-based estimates." The symptoms of Groupthink include:

> illusions of invulnerability and of unanimity held by members of the group, euphoria and overoptimism, risk-taking and aggression, shared stereotypes of opponents, sloganistic thinking, beliefs in the inherent morality of the group, direct and indirect pressures for conformity, and poor information processing.[140]

Victims of Groupthink lose sight of reality. Highly threatened groups exhibit the greatest capacity to rationalize their actions and decisions. They can sustain a policy position despite an abundance of discrepant information.

Irving Janis found evidence of Groupthink in a number of presidential decisions. Pearl Harbor, Korea, the

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[139]Irving L. Janis, <u>Victims of Groupthink</u> (Boston: Houghton Mifflin, 1972), 202.

[140]As summarized by George, 93.

Bay of Pigs, and Vietnam provided a rich and supportive data base. The French Army prior to the First World War was an embattled group. The Dreyfus affair and the subsequent vilification of the army by the Left turned the French Army in on itself.[141] As the threat to the French Army's parochial interests increased, the bias in French doctrinal thinking worsened.[142] The French Army's ability to rationalize its offensive doctrine grew as the domestic political environment grew more threatening. Though evidence of the superiority of the defense piled up in the early 1900s, the French Army rushed headlong into the First World War with an offensive doctrine. A bloodbath resulted.

The U.S. Army in the mid-seventies was at least as threatened as the French Army in the early 1900s. The Active Defense doctrine, however, was more consistent with external factors than any doctrine since. The U.S. Army avoided the perils of groupthink in the mid-seventies.

The reasons are clear. Doctrine development was centralized in the hands of an individual committed to systems analysis. GEN DePuy's recent experience on the Army Staff made him uncommonly aware of the external constraints on Army policy. Furthermore, GEN DePuy set out to change the Army by changing doctrine. He wanted to shake up the

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[141]Porch, 406.

[142]Snyder, 54-56 and 104-106.

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Army; he expected resistance from the Army. There was little chance that subtle pressures to conform would deter GEN DePuy from carrying out his plans.

The eighties were golden years for the Army, but, as the decade closed, a number of political hazards loomed on the horizon. The Army's organizational interests will be as threatened in the nineties as they were in the mid-seventies. The Army faces severe reductions in its budget. Involuntary separations seem inevitable. Under currently planned reductions, the manpower ceiling will fall to the lowest level since 1940. After Vietnam the Army was reduced to thirteen active divisions. Current plans reduce the Army to twelve. The Army is under great pressure, it would not be surprising if it showed symptoms of Groupthink.

Coincident with this increasing threat to the Army's interests, the gap between reality and the doctrinal image of war yawns. We saw earlier that the AirLand Battle Future doctrine is less consistent with external factors than any of the previous editions of FM 100-5. The threatening domestic environment provokes defensive reflexes in the Army that undermine its objectivity. The hostile environment helps the embattled Army rationalize its unrealistic but desirable doctrine.

The current process of doctrine development increases the Army's susceptibility. The consensus-building

approach prevents radical departure from a doctrine that the Army likes. The selective use of history allows organizational preferences to persist. The process of doctrine development permits the Army's biased interpretation of external factors. The hostile environment aggravates the degree of bias.

In summary, the formative experiences of decisionmakers affect the doctrinal choices they make. If the process of developing doctrine is highly centralized, the personal history of a few decisionmakers may explain key changes in doctrine. The 1976 edition, for example, can be explained by a careful review of GEN DePuy's career. Even if the process is decentralized, the doctrinal decisions may be controlled by a generation of officers that share a common experience that is reflected in doctrine. The current emphasis on nonlinearity corresponds with the rise of officers who served in Vietnam at junior levels to positions of authority. The common experience of this generation of officers shapes the current consensus on doctrine.

Hostile environments and a permissive process of doctrinal development increase the Army's ability to rationalize an incongruous doctrine. The AirLand Battle Future doctrine, which least corresponds with external factors, took shape when the Army's organizational interests

were severely threatened and historical analogies were
weighted more than systems analysis.

Summary

The internal variables contribute significantly to a
full explanation of the change in U.S. Army doctrine during
the last two decades. They explain certain specific
innovations in doctrine, and they explain the gradual
decline in the explanatory power of the external variables.

The Active Defense doctrine took into account
external constraints more than any edition of FM 100-5
since. Paradoxically, the doctrine that best answered what
the nation wanted of the Army, least provided what the Army
needed in its doctrine.

The process used to decide and justify the 1976
edition of FM 100-5 insulated it from the bias that skewed
subsequent editions. GEN DePuy's centralized control of
doctrine reduced the influence of the Army's organizational
interests. It frustrated efforts by factions within the
Army to manipulate doctrine to their particular benefit at
the expense of the Army as a whole.

However, the centralized process allowed GEN DePuy's
personal biases too great an influence over the content of
doctrine in 1976. The reliance on systems analysis yielded
an attrition doctrine that was unpalatable to the Army. The
process allowed a minority to impose its views on FM 100-5;

it did not guarantee the Army's acceptance of the minority view.

In large bureaucracies, "change imposed from the top has a half-life closely related to the job tenure of its advocates."[143] The Active Defense doctrine was no exception. Two years after the 1976 edition was published, the Army was considering significant revisions.

The Army picked the doctrine that best served its internal needs in 1982. GEN Starry's concern with building a consensus for the new doctrine allowed the Army's organizational interests to dominate over operational requirements. Cognizant of the Army's interests, the 1982 edition returned to an offensive doctrine. The emphasis on forging a consensus strengthened the hand of self-serving factions who bargained ruthlessly for their narrow concerns. Powerful factions in the Army signed up for the deep attack, insisting it be included in the 1982 edition, because it served their parochial interests. Rather than building a consensus for the doctrine that answered operational requirements, AirLand Battle doctrine codified the doctrinal preference of the Army.

The generous budgets of the early Reagan years and the conducive strategic and political environment left the

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[143]Richard G. Davis, The 31 Initiatives (Washington, D.C.: Office of Air Force History, 1987), 86.

Army a degree of freedom in doctrinal choice in the early eighties. By the mid-eighties the budget stalled. In the nineties the budget is plummeting, and the threat is evaporating. External constraints have closed in on the Army, limiting its degrees of freedom.

Though the Army's room for maneuver is vanishing, the Army holds on to its maneuver doctrine. The hostile environment fuels the rationalization that is needed to span the widening gap between operational requirements and organizational preferences.

CHAPTER 5

CONCLUSION

This thesis examined the recent evolution of U.S. Army doctrine. It identified the change in doctrine by analyzing the differences between the four most recent versions of FM 100-5. During the last two decades, the Army revised its capstone manual -- FM 100-5, <u>Operations</u> -- three times: in 1976, 1982, and 1986. A fourth revision is now underway. Only the revision in 1986 can be considered incremental. The other three include significant innovations with far-reaching consequences.

The change in U.S. Army doctrine was caused by a dynamic mix of external and internal factors. This thesis considered five external factors: the change in technology, strategy, threat, domestic political context, and resource allocation. It considered four internal factors: the Army's organizational interests, the process of doctrine development, the bureaucratic politics within the Army, and the cognitive psychology of the Army's leaders. The patterns of change in doctrine and the explanatory factors were compared. Some intriguing matches were found. This

chapter will summarize the findings of the thesis and derive some tentative conclusions.

Chronological Recapitulation

The 1976 edition departed radically from previous doctrines by viewing war from the perspective of attrition theory, by focusing on firepower and exchange rates, and by favoring unequivocally the defense. If the 1976 edition was revolutionary, the 1982 edition was reactionary. It turned doctrine 180 degrees and returned to themes that had inspired the Army's doctrine throughout the century. It viewed warfare through the lens of maneuver theory, underlined the human dimensions of war, and favored the offense. The 1982 edition had more in common with the 1941 edition than the 1976 edition.

The 1976 edition adapted the Army's doctrine to the operational requirements of the seventies -- a numerically superior, qualitatively comparable, and ominously poised Soviet threat. The situation on the home front was almost as intimidating. The Army faced a hostile legislature and declining budgets. These external constraints left the Army little doctrinal choice. The Army's leadership opted for the technologically favored defense.

The Active Defense, however, neglected organizational needs of the Army. The goal of Active Defense, averting defeat, was uninspiring; soldiers needed

to win. A favorable exchange rate was no substitute for victory. The Active Defense reduced leaders to managers and warriors to technicians. The field Army, as a result, never embraced the Active Defense doctrine.

The 1982 edition, in contrast, took shape in the permissive environment of the early years of the Reagan administration. The Soviet military was as threatening as ever, but the support at home improved significantly. The Army's budget, pay and benefits, and quality of recruits improved dramatically. A reform movement on the Hill pushed the Army in the direction it wanted to go. In this permissive environment, the Army played down the operational requirements and crafted a doctrine that addressed the organizational needs of the Army.

AirLand Battle restored the warrior spirit. It envisioned short, decisive wars won by the army that fielded the best soldiers and leaders. It justified the most modern equipment and promised fewer casualties. The field Army liked AirLand Battle.

Minor adjustments were necessary in 1986. The ruffled feathers of allies and sister services had to be smoothed. The main themes of the doctrine, however, were inviolate. The environment let the Army maintain the doctrine it preferred for organizational reasons.

As the eighties closed, however, the environment began to close doctrinal options again. The collapse of the Soviet empire, the withdrawal of Soviet forces from Eastern Europe, the negotiated reductions of CFE undercut the Army's case for an offensive doctrine. Mutual security has replaced simple, unilateral security in the national strategy. An offensive doctrine appears incongruous in the nineties.

Rather than adapting doctrine to the changing environment, AirLand Battle Future alters its image of the future so that the Army can keep the maneuver doctrine it prefers. It assumes away the alternatives to maneuverism by assuming the next battlefield will be nonlinear.

AirLand Battle Future seems to disregard the political and economic constraints on doctrine as well. It calls for expensive modernization when drastic reductions in budgets are likely. The need for modernization derives from a doctrinal reform, though most analysts feel the current doctrine performed amazingly well in Desert Storm. AirLand Battle Future simply seems unrealistic.

Since the early eighties, the process of doctrine development has sought a consensus solution. The consensual process ensures the Army's support for the doctrine because it ensures doctrine serves the parochial interests of the proponents. The consensual process allowed organizational

preferences to dominate over operational requirements in the early eighties. Today, it prevents a radical departure from the themes, like deep attack, that enjoy consensus.

The subordination of operational requirements to organizational preferences was easily rationalized by the Army in the early eighties. The doctrine developers lacked a rigorously skeptical way of validating doctrine. Anecdotal history, which they found persuasive, could justify any doctrine.

In contrast, the Active Defense doctrine was carefully validated with computer models. The advantage of systems analysis is that it obliges the analyst to be methodical and deliberate. It does not prevent him from making convenient assumptions, but it does require him to state those assumptions plainly. The hazard of systems analysis is that it introduces, as it did in 1976, an attrition bias in the doctrine.

The Active Defense doctrine made tough choices to reconcile the Army's doctrine with operational requirements. The centralized process of doctrine development in the seventies made this possible. GEN DePuy chose between proponents. Had he been more concerned with building a consensus, he would have been obliged to accommodate them all. Had he been more concerned with building a consensus, his doctrinal reforms might have had a more lasting effect

on the Army. A central and irreducible paradox emerges from this analysis: to reform the Army requires the Army's consent, but the Army's consent is most likely when the reforms are inconsequential.

When the process is centralized, individual biases color doctrine. GEN DePuy's thumb print was unmistakable in the Active Defense. The consensual process is no guarantee against individual bias. Individual biases can still influence doctrine developed by a consensual process if the bias is shared by a sufficiently powerful group. The Vietnam experience influences doctrine today as World War II influenced doctrine in the seventies.

Tentative Conclusions

The U.S. Army usually attributes change in its doctrine to change in external and exculpatory factors. External factors explain, for the most part, the adoption of the Active Defense doctrine in 1976. The change in doctrine since the early eighties, however, is better explained by internal factors. This discovery leads to four derivative conclusions:

1. Doctrine reflects the biases and preferences of the people and organizations that write it. Given the strong organizational motives for an offensive doctrine, calls for an offensive doctrine should be received with a healthy dose of skepticism.

2. The process we follow to develop doctrine and the methods we use to validate it influence its content. When decisionmakers structure the organization, they influence the outcome. We must carefully consider this when we design structures for doctrine development.

3. Military professionalism and hierarchy do not eliminate bureaucratic politics. The fundamental challenge of doctrine development is finding a way to get the Army to value an idea according to its quality, not the political power of its advocate.

4. The many purposes of doctrine prevent it from being "the best available thought." Doctrine should logically guide force development, but when we put doctrine to this purpose we often corrupt it.

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320

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